

**LOT 15 EQUIPMENT LISTING**

| <b>S/No.</b> | <b>LOT NO.</b> | <b>EQUIPMENT DETAILS</b>  | <b>QTY</b> |
|--------------|----------------|---|------------|
|              | LOT 15-1       | 4 K with 3D Endovision System Complete Visualization Tower  | 2          |
|              | LOT 15-2       | 4k Endovision Tower and Set Specifications  | 1          |
|              | LOT 15-3       | Extracorporeal Shockwave Lithotripsy with Compatible C-Arm Specifications (Electrohydraulic Technology) | 1          |
|              | LOT 15-4       | Holmium Lasers 30 to 35 Watts   | 1          |
|              | LOT 15-5       | Holmium Lasers 120 Watts  | 1          |
|              | LOT 15-6       | Treadmill Stress Test Machine   | 0          |
|              | LOT 15-7       | Urodynamics System  | 1          |
|              | LOT 15-8       | Brachytherapy Unit complete with planning system  | 1          |
|              | LOT 15-9       | Brachytherapy Table   | 1          |

## LOT 12 - SUPERSPECIALTIES

### LOT 15-1 4 K with 3D Endovision System Complete Visualization Tower

| Item Code No.          | Department  | Section | Item Description |
|------------------------|---|---------|------------------|
| LOT 15-1               | Super specialties   | Surgery | Endoscopic Tower |
| 1. General Description |   |         |                  |
| S. No                  | Specifications  |         |                  |
| 1.1.                   | <b>Processor</b>  |         |                  |
| 1.1.1.                 | <p>1.1.2. Processor for following should be quoted:-</p> <ul style="list-style-type: none"> <li>a) 2- Dimensional endoscopic video camera in 4K resolution (3840*2160)</li> <li>b) 3-Dimensional endoscopic video camera in 4K resolution (3840 *2160)</li> <li>c) Slot for Video Scopes (Digital Scopes/Chip on tip) like Video URS, Choledochoscope and GI Scopes.</li> </ul> <p>1.1.3. System should have facility for Optical Contrast Differentiation System, and it Should have special filter for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions.</p> <p>1.1.4. System Should be capable of Near Infrared fluorescence Imaging (ICG application) with below features</p> <ul style="list-style-type: none"> <li>a) Overlay:</li> </ul> <p>1.1.5. White light image with superimposed display of NIR/ICG fluorescence.</p> <p>1.1.6. Possible to select the preferred color for NIR/ICG imaging: Either blue or green.</p> <ul style="list-style-type: none"> <li>a) Monochromatic:</li> </ul> <p>1.1.7. NIR/ICG fluorescence signal in white. Background in black for maximum contrast.</p> <ul style="list-style-type: none"> <li>a) Intensity Map:</li> </ul> <p>1.1.8. White light image with superimposed display of NIR/ICG fluorescence. NIR/ICG signal display will appear in different colors depending on the strength of the detected NIR signal.</p> <p>1.1.9. Picture in Picture of visualization modes with Standard and Optical Contrast Differentiation.</p> <p>1.1.10. Automatic adjustment of light intensity of light source and controlled from Camera head.</p> <p>1.1.11. Outputs: All Compatible outputs should be there (12GSDI,D.P) for 4K resolution and DVI for HD resolution.</p> |         |                  |
| 1.2.                   | <b>32 and 55-Inch Monitor 1 each</b>  |         |                  |
|                        | <p>1.1.12. ALL in one Medical Grade Monitor capable of displaying:</p> <ul style="list-style-type: none"> <li>a) 3D in 4K resolution</li> <li>b) 2D in 4K resolution</li> <li>c) 2D in Full HD resolution</li> <li>d) 3D in Full HD resolution</li> </ul>   |         |                  |

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| LOT 15-1      | Super specialties  | Surgery | Endoscopic Tower |
|               | 1.1.13. Should be supplied with 3D glasses – 10 Nos<br>1.1.14. Certified to: ANSI/AAMI ES60601-1:2005, UL 60601-1, CAN/CSA C22.2 NO.60601-1:14 and EN 60601-1.<br>1.1.15. CE label according to MDD, class I.  |         |                  |
| 1.3.          | <b>LED Light source with Fiber optic cable</b>   |         |                  |
|               | 1.1.16. Should have Lumen >2000<br>1.1.17. Lamp life of approx. 30,000 hrs. and above<br>1.1.18. 4.8mm Fiber Optic Cable and 300cm Long<br>1.1.19. Should have touch display which provides an intuitive & user-friendly interface that directly displays relevant data<br>1.1.20. Lamp type:<br>a) High-performance LEDs, white light LED and near infrared LED, which are active individually or simultaneously.<br>1.1.21. Certified To: - IEC 601-1 & UL 544 CE According to MDD, protection class 1/CF  |         |                  |
| 1.4.          | <b>IMAGE/VIDEO RECORDING, DATA ARCHIVING, SIGNAL MANAGEMENT &amp; STREAMING</b>  |         |                  |
|               | <b>Recording:</b><br>1.1.22. Medical grade documentation unit with CE.<br>1.1.23. Controllable via Touch screen of size 10” or more.<br>1.1.24. Capture video & images in 4K, UHD, Full HD, 3D & audio files.<br>1.1.25. Internal storage of 2TB & more.<br>1.1.26. Should have minimum of 8 inputs and 8 outputs.<br>1.1.27. All inputs and outputs should be capable of routing 4K,3D and Full HD signals in native resolution.<br>1.1.28. USB support for storage on USB drives.<br>1.1.29. Supports network storage on file servers.<br>1.1.30. Offer two channel simultaneous recording for still images & videos.<br>1.1.31. Shall have HL7 connectivity.<br>1.1.32. Shall have DICOM connectivity.<br>1.1.33. WHO certified Patient Safety Checklist.<br><br><b>Streaming:</b><br>1.1.34. Surgical video & image unicast streaming in Full High Definition (1920 X 10290) over local area network to multiple participants.<br>1.1.35. Offer Bi-directional video transmission & bi-directional audio transmission over LAN.<br>1.1.36. Streaming picture with telestration and controllable to all participants. |         |                  |
| 1.5.          | <b>4K Camera Head</b>  |         |                  |
|               | <b><u>Technical Specifications:</u></b><br><br>1.1.37. Pixels: 3840 X 2160 Pixels<br>1.1.38. AGC: Microprocessor controlled  |         |                  |

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|               | 1.1.39. Lens: Integrated Zoom Lens f = 19 mm<br>1.1.40. Color Space BT.2020 emulation<br>1.1.41. Control buttons: 3 (2 of them freely programmable).<br><br><b>Camera Head Should be able to perform both White light and Near Infrared application.</b>   |         |                  |
| 1.6.          | <b>TELESCOPES for 2D</b>   |         |                  |
|               | 1.1.42. Telescopes with the 4K system should be provided with Dimensions as below for White light and Near Infrared application.<br>a) 10mm 0 Degree and 30 Degree with 300cm or more working Length – Each 1 QTY.<br>b) 5mm 0 Degree and 30 Degree with 290cm or more working Length – Each 1 QTY.  |         |                  |
| 1.7.          | <b>Telescopes for 3D in 4K resolution with integrated camera head</b>  |         |                  |
|               | 1.1.43. 3D imaging via two distal 4K sensors<br>1.1.44. Camera and Telescopes should be one piece<br>1.1.45. 10mm 0 degree and 30 degrees (1 each)<br>1.1.46. Switching of 3D to 2D can be done<br>1.1.47. Free from Focus and Depth of Field should be 30-200mm<br>1.1.48. Should be autoclavable.<br>1.1.49. Sterilization tray for the scope should be provided.<br><b>3D Should be able to perform both White light and Near Infrared application.</b> |         |                  |
| 1.8.          | 1.8.1. <b>50</b> Litre Insufflator with external heating element with 50 tubes   |         |                  |
| 1.9.          | 1.9.1. High Flow Trocar with HI cap connection to be used with 50 litre Insufflator.   |         |                  |
| 1.10.         | 1.10.1. 400 Watt Electro Surgical Unit with Smoke Evacuation system.   |         |                  |
| 1.11.         | 1.11.1. Equipment Cart from Same manufacturer Should be Quoted for all the above Items.  |         |                  |
|               | 1.11.2. All Equipment's Should be Quoted from Same manufacturer.   |         |                  |
|               | <b>Suction Irrigation unit Compact</b>   |         |                  |
| 1.12.         | 1.12.1. It shall be a combination of suction/irrigation pump for use in gynaecological, laparoscopic and Urology interventions. The adaptation to the correct mode of surgery intended should happen automatically and Manually when the correct type of tubing is used. The insertion of pressure lines into the unit should be simplified for ease of  |         | 1 (one)          |

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| LOT 15-1                        | Super specialties   | Surgery  | Endoscopic Tower |
|                                 | <p>use. The unit should be equipped with electronic, safety circuits that cut the suction/irrigation operation if the unit departs consistently from the present values.</p> <p><b>The suction/irrigation unit should have the following features:</b></p> <p>1.12.2. Easy to user bundle controls for the control of all functionalities.</p> <p>1.12.3. Touch controls and digital displays ensure safe and precise adjustment of the set values.</p> <p>1.12.4. During power – up, all system go through and automatic self- test and are only released after a positive result</p> <p>1.12.5. Safety functions that control any departure from operator settings.</p> <p>1.12.6. Automatic recognition of type of procedure intended, when tubing is inserted.</p> <p>1.12.7. Audible alarms in case of malfunction.</p> <p>1.12.8. Suction rate preselect are saved in memory.</p> <p>1.12.9. Should have a suction mode that automatically maintains irrigation pressure and flow constant.</p> |  |                  |
|                                 | <p><b>The suction/ Irrigation unit should have the following technical specifications:</b></p> <p>1.12.10. Power Supply voltage : 100-240 VAC</p> <p>1.12.11. Power frequency: 50-60 Hz</p> <p>1.12.12. Operating conditions: +10<sup>0</sup>c to +40<sup>0</sup>c</p> <p><b>Irrigation:</b></p> <p>1.12.13. Pressure:- Selectable Mode 0.200&amp;0.400 mmHg</p> <p>1.12.14. Flow Rate:– Selectable Mode 0-500 &amp;0-1000ml/min</p> <p>1.12.15. Pressure indicator:- Digital Display</p> <p>1.12.16. Flow indicator:- Digital Display</p> <p>1.12.17. Certified to IEC 60601.1, CAN/CSA 22.2 No. 601.1-M90:</p> <p>1.12.18. Type of protection against electrical shocks shocks: protection class1</p> <p>1.12.19. US FDA/ European CE (Issued by a notified body) approved Model should be offered.</p>   |  |                  |
| 2. LAPAROSCOPY HAND INSTRUEMNTS |   |  |                  |
| 2.1.                            | 2.1.1.  | Veres needle 120mm including luer lock tube part   | 1 (one)          |
|                                 |   | <b>OR</b>  |                  |
|                                 | 2.1.2.  | Veres needle 150mm including luer lock tube part   |                  |
| 2.2.                            | 2.2.1.  | Trocar Cannula 10-11 mm diameter with thread and rotating insufflations should have multifunctional valve to prevent damage of sharp | 1 (one)          |

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| LOT 15-1      | Super specialties | Surgery   | Endoscopic Tower  |
|               |                   |   | instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm |
|               | 2.2.2.            | Trocar Cannula 10- 11 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 gas. The working length of the cannula should be 100mm  | 1 (one)   |
| 2.3.          | •                 | Trocar Cannula 5-5.5 diameter with thread and rotating insufflations. Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm  | 1 (one))  |
| 2.4.          | •                 | Trocar Cannula 5-5.5 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100mm | 1 (one)   |
| 2.5.          | •                 | Trocar, pyramidal tip, diam. 10 mm working length 100 mm compatible to cannula  | 1 (one)   |
| 2.6.          | •                 | Trocar with blunt tip, diam. 10 mm working length 100 mm compatible to cannula  | 1 (one)   |
| 2.7.          | •                 | Trocar, pyramidal tip tip5 mm, length 100 mm compatible to cannula  | 1 (one)   |
| 2.8.          | •                 | Trocar with blunt tip, diam. 5 mm working length 100 mm compatible to cannula   | 1 (one)   |
| 2.9.          | •                 | Reducer, diam.11mm to 5,5mm   | 1 (one)   |
| 2.10.         | •                 | Three piece laparoscopic autoclavable Maryland dissecting and Grasping Forceps. 360degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.    | 1 (one)   |
| 2.11.         | •                 | Three piece laparoscopic atraumatic autoclavable double window curved Grasping forceps360 degree rotational sheath, size 5mm length 33-36cm. single action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.                          | 1 (one)   |
| 2.12.         | •                 | Three piece laparoscopic atraumatic autoclavable Grasping forceps Debakey360 degree rotational sheath, size 5mm length  | 1 (one)   |

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|               | 33-36cm. curved double action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.  |         |                  |
| 2.13.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable Bowel Grasping forceps double action jaws, fenestrated, 360degree rotational sheath, size 5mm length 33-36cm. double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.</li></ul>                              |         | 1 (one)          |
| 2.14.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360degree rotational sheath, size 5 mm, length 33-36 cm long double action jaws. Ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li></ul>  |         | 1 (one)          |
| 2.15.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360degree rotational sheath, size 10 mm, length 33-36 cm long double action jaws. Ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li></ul> |         | 1 (one)          |
| 2.16.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable claw Grasping forceps with ratchet 2x3 teeth, 360degree rotational sheath size 10mm length 36 cm long single action jaws, with ergonomic plastic handle can be dismantled with the press of a button</li></ul>   |         | 1 (one)          |
| 2.17.         | <ul style="list-style-type: none"><li>Three piece automatic laparoscopic autoclavable Babcock Grasping forceps, double action jaws, fenestrated, 360degree rotational sheath, size 5 mm length 33-36 cm, long double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button.</li></ul>           |         | 1 (one)          |
| 2.18.         | <ul style="list-style-type: none"><li>Three piece automatic laparoscopic autoclavable fenestrated Grasping forceps, double action jaws, fenestrated, 360degree rotational sheath, size 5 mm length 33-36 cm, long double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button.</li></ul>       |         | 1 (one)          |
| 2.19.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable Bowel Grasping forceps double action jaws, fenestrated, 360degree rotational sheath, size 5mm length 33-36cm double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.</li></ul>                               |         | 1 (one)          |
| 2.20.         | <ul style="list-style-type: none"><li>Three piece laparoscopic autoclavable curved METZENBAUM scissors, 360degree rotational sheath with</li></ul>   |         | 1 (one)          |

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| LOT 15-1      | Super specialties | Surgery | Endoscopic Tower   |
|               |                   |         | connector pin for unipolar coagulation m size 5mm length 33-36cm long double action jaws with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button  |
| 2.21.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Hook scissors, 360degree rotational sheath, with connector pin for unipolar coagulation size 5mm length 33-36 cm long double action jaws with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>   |
| 2.22.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic atraumatic autoclavable dissecting and Grasping forceps with dolphin nose 360degree rotational sheath with connector pin for unipolar coagulation size 5 mm length 36 cm, double action jaws, ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button.</li> </ul>                        |
| 2.23.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic atraumatic grasping forceps jaw throat with wavy tooth edge 36degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>                              |
| 2.24.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Maryland bipolar dissecting and Grasping Forceps. 360degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>                          |
| 2.25.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Universal grasping forceps pyramid shaped and cross cutting tooth 360degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>          |
| 2.26.         |                   |         | <ul style="list-style-type: none"> <li>Grasping forceps atraumatic clamp axial grooves with fine horizontal serrations, double jaw action, (without HF) diameter 5 mm, WL 31-33cm, springy branches, cpl. consisting of: Handle, sheath tube Insert</li> </ul>   |
| 2.27.         |                   |         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable mister grasping and dissection forceps, angled, fine pyramid shaped tooth, 360degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul> |



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| LOT 15-1      | Super specialties   | Surgery | Endoscopic Tower |
| 2.28.         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable spoon forceps, 360degree rotational sheath, without connector pin for unipolar coagulation size 10 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>  |         | 1 (one)          |
| 2.29.         | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable grasping and preparation forceps fine horizontal serrations, fenestrated, 360degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul> |         | 1 (one)          |
| 2.30.         | <ul style="list-style-type: none"> <li>High frequency monopolar cord</li> </ul>   |         | 1 (one)          |
| 2.31.         | <ul style="list-style-type: none"> <li>High frequency bipolar cord</li> </ul>   |         | 1 (one)          |
| 2.32.         | <ul style="list-style-type: none"> <li>L-shaped hook electrode with unipolar HF connection</li> </ul>   |         | 1 (one)          |
| 2.33.         | <ul style="list-style-type: none"> <li>Spatula / Blunt dissector with unipolar HF connection</li> </ul>   |         | 1 (one)          |
| 2.34.         | <ul style="list-style-type: none"> <li>Needle electrode with unipolar HF connection</li> </ul>  |         | 1 (one)          |
| 2.35.         | <ul style="list-style-type: none"> <li>Grasping forceps spoon shaped 10 mm, WL 31-33cm</li> </ul>   |         | 1 (one)          |
| 2.36.         | <ul style="list-style-type: none"> <li>Three piece laparoscopic Bipolar coagulating Grasping Forceps, fenestrated type with overload tissue protection, , wide jaws with connector pin for bipolar coagulation 360degree rotational sheath size 5mm length 36cm long, single action jaws ergonomic plastic handle with larger contact area can be dismantled with the press of a button</li> </ul>  |         | 1 (one)          |
| 2.37.         | <ul style="list-style-type: none"> <li>Three piece laparoscopic Bipolar coagulating Grasping Forceps, dolphin nose with overload tissue protection, , wide jaws with connector pin for bipolar coagulation 360degree rotational sheath size 5mm length 36cm long, single action jaws ergonomic plastic handle with larger contact area can be dismantled with the press of a button</li> </ul>  |         | 1 (one)          |
| 2.38.         | Needle holder jaws straight dismantling in to three part namely outer tube handle and inserts, ergonomic pistol handle with disengage able ratchet jaw curved to left size 5mm length 33cm  |         | 1 (one)          |
| 2.39.         | Needle holder with tungsten carbide insert jaws curved to right dismantling in to three part namely outer tube handle and inserts, ergonomic pistol handle with disengageable ratchet jaw curved to left size 5mm length 33cm   |         | 1 (one)          |
| 2.40.         | Macro needle holder with tungsten carbide insert jaws curved to left dismantling in to three parts  |         | 1 (one)          |

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| LOT 15-1      | Super specialties  | Surgery | Endoscopic Tower |
|               | namely outer tube handle and inserts, ergonomic pistol handle with disengageable ratchet jaw curved to left size 5mm length 33cm                     |         |                  |
| 2.41.         | Fascial Closure Instrument for subcutaneous ligature of trocar incisions, size 2.0 mm,   |         | 1 (one)          |
| 2.42.         | Injection & puncture cannula 5 mm, WL 31-33cm length with luer lock  |         | 1 (one)          |
| 2.43.         | Retrieval of foreign body/stones forceps, 10 mm without ratchet length 31-33cm, dismountable into handle, insert & outer tube                        |         | 1 (one)          |
| 2.44.         | Fan shaped retractor-Rotating, 5mm, WL 31-33cm, dismantling facility   |         | 1 (one)          |
| 2.45.         | Suction-irrigation tube, 5mm with maintenance-free two-way stopcock, thumb control for irrigation and suction wl 27-29cm                             |         | 1 (one)          |
| 2.46.         | Combination suction and irrigation tube with stop valves, 5mm mm 5 mm wl 33 cm   |         | 1 (one)          |
| 2.47.         | Medium Large clip applicator dismantlable rotating size 100mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip.        |         | 1 (one)          |
| 2.48.         | Medium Large Hem-O-Lokclip applicator,   |         | 1 (one)          |
| 2.49.         | Extra Large Hem-O-Lokclip applicator,  |         | 1 (one)          |
| 2.50.         | <b>All above items should be USFDA/European CE</b>   |         |                  |
| 2.51.         | trolley standard quality   |         | 1 (one)          |
| 2.52.         | Cap Washers- for 5 & 10 mm each for cannula and reducers   |         | 50 nos           |
| 2.53.         | Ring Washers- for 5 & 10 mm each for trocar cannula  |         | 50 nos           |
| 2.54.         | Container System: Metal & Plastic- For Sterilization and storage of telescopes, hand instruments and other accessories, Different sizes, CE approved |         | 2(two)           |
| 2.55.         | Formalin Chamber size: 2" x" x" (L x B x H) with three trays, CE approved  |         | 2(two)           |
| 2.56.         | Suitable autoclavable plastic tray double tray for sterilization, CE approved  |         | 2(two)           |
| 2.57.         | UPS 10 KVA, with UK BS Fittings  |         | 1 (one)          |
| 2.58.         | Cleaning Brush   |         | 10 nos           |
| 2.59.         | Camera Cover   |         | 100 nos          |
| 2.60.         | Silicon Spray  |         | 25 nos           |
| 2.61.         | Co2 Cylinder 7-9 KG BOC  |         | 2(two)           |
| 2.62.         | Clips (Hem-O-Lok)  |         | 2(Box)           |

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| LOT 15-1      | Super specialties   | Surgery | Endoscopic Tower |
| 2.63.         | LT=300 Clips 300  |         | 10(Box )         |
| 2.64.         | LT=300 Clips 400  |         | 5(Box            |
| 2.65.         | ITEM NO 50 TO 63 SHOULD BE UK BS & CE COMPATIBLE TO ALL ABOVE ITEMS |         |                  |

#### **LOT 15-2 4K ENDOVISION TOWER AND SET SPECIFICATIONS**

| Item Code No. | Department   | Section | Item Description            |
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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
|               | <b>4K CAMERA Set</b>   |         | 1(One)                      |
| 1.            | <ul style="list-style-type: none"> <li>The system should be Digital endoscopic video camera with maximum Resolution of 3840 X 2160 pixels, progressive scan to guarantee genuine 4K.</li> <li>The system should have facility of 3x Digital Zoom Lens or more.</li> <li>The system should have facility for capturing 4K UHD HD Stills and FULL HD Videos in External USB drive.</li> <li>System should have facility to offer various visualization modes for surgery and diagnosis by shifting the color spectrum like <b>BLUE &amp; GREEN</b> light for recognition of the finest tissue Structures and their differentiation.</li> <li>Picture in Picture of visualization modes.</li> <li>Automatic adjustment of light intensity of light source.</li> </ul> <p><b><u>Technical Specifications:</u></b></p> <ul style="list-style-type: none"> <li>Pixels 3840 X 2160 Pixel</li> <li>AGC: Microprocessor controlled</li> <li>Lens: Integrated Zoom Lens f = 18 mm</li> <li>Color Space BT.2020 emulation</li> <li>Control buttons: 3 (2 of them freely programmable).</li> <li>Video output: 1 Display Port1.2 ,<br/>1 x DVI-D output,<br/>1 x 12G- SDI output,</li> <li>3 x camera input for communication with compatible camera modules,</li> </ul> |         |                             |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
|               | <ul style="list-style-type: none"> <li>• LAN connection,</li> <li>• 4 x USB connection (2 x front, 2 x back).</li> </ul> Input: Keyboard input for character generator.<br>Power Supply: - 200-240 VAC 50/60 Hz<br><br>Certified to :IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class I/cf defib   |         |                             |
| 2.            | <b>58 Inch 4K Monitor or more</b>  |         |                             |
|               | The monitor should have: <ul style="list-style-type: none"> <li>• Color Space – BT.2020 emulation</li> <li>• Aspect ratio: 16:9</li> <li>• Contrast Ratio : 5000:1</li> <li>• Effective Resolution: 3840 X 2160 Pixels</li> <li>• Max. observation angle: 178° vertical/horizontal.</li> <li>• Inputs: 1 x DP 1.2 , 2XDVI-D, 1X 12G SDI</li> <li>• Outputs: 1 x DVI-D, 12GSDI</li> <li>• CE label according to MDD, class I.</li> </ul>  |         |                             |
| 3.            | <b>Power LED with Fiber optic cable</b>  |         |                             |
|               | <ul style="list-style-type: none"> <li>• Should have touch display which provides an intuitive &amp; user-friendly interface that directly displays relevant data.</li> <li>• Cold Light Fountain LED Light Source</li> <li>• Lumens : 2100 and above</li> <li>• Color Temperatures: 6000K</li> <li>• Light Outlets: 1</li> <li>• Lamp life of approx.: 30,000 hrs and above</li> <li>• 4.8mm Fiber Optic Cable and 300cm Long</li> <li>• Certified To: - IEC 601-1 &amp; UL 544 CE According to MDD, protection class I/CF</li> </ul> |         |                             |
| 4.            | <b>IMAGE/VIDEO RECORDING AND DATA ARCHIVING SYSTEM</b>   |         |                             |
|               | State of the art user friendly Medical grade system (certified to be used in OT) should be offered with following features, <ul style="list-style-type: none"> <li>• User should have full control of the system from the sterile field via camera head buttons, optional touch screen, optional foot switch.</li> <li>• Parallel (synchronic or independent) recording of two image sources.</li> </ul>   |         |                             |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
|               | <ul style="list-style-type: none"> <li>• Still images and videos (optional with audio) in 2D, 3D and 4K.</li> <li>• Internal memory at least 2 TB</li> <li>• Playback of 2D, 3D and 4K content</li> <li>• System Should be capable for generating the reports and connect with the external printer.</li> <li>• DICOM and HL7 compliant.</li> <li>• WHO certified Safety Checklist incorporated in the system.</li> <li>• Type approval: IEC 60601-1-1, EN60601-1, EN60601-2.</li> <li>• Classification: CE, MDD, CSA.</li> </ul>  |         |                             |
| 5.            | <b>Imported Endoscopic Trolley</b>   |         |                             |
|               | Endoscopic Trolley Compatible with the above system from the same manufacturer should be provided.   |         |                             |
| 6.            | <b>TELESCOPES</b>  |         |                             |
|               | Compatible Telescopes with the 4K system should be quoted with Dimensions as below:<br>1) 10mm 0 Degree & 30 Degree with 30cm or more working Length: Each 2 QTY.<br>2) 4mm 30 Degree with 18cm working Length: Each 1 QTY   |         |                             |
|               | All the Above Equipment's are to be supplied by the same manufacturer.   |         |                             |
| 7.            | <b>ELECTRONIC CO<sub>2</sub> Insufflator</b>   |         | 30 L                        |
|               | <ul style="list-style-type: none"> <li>• CO<sub>2</sub> insufflator high flow (45- 50) LITER (220-240) VOLT with power cord</li> </ul> It should have following features:- <ul style="list-style-type: none"> <li>• Insufflation tube for heating the Co<sub>2</sub> gas up to patient body temperature.</li> <li>• pressure up to maximum 15 mmhg and flow range up to maximum 15l/min.</li> <li>• High flow mode with flow performance up to 50 litre/min or more.</li> <li>• Easy and intuitive use with user friendly colour touch screen for easy and precise setting of set values for pressure and flow and of insufflation mode, as well as for clear display of corresponding set values and actual values.</li> <li>• Fully automatic electronically controlled gas refill.</li> </ul> |         | 1(one)                      |

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|               |   |         |                             |
|               | <ul style="list-style-type: none"> <li>• Safety system:- constant monitoring of intra-abdominal pressure, any overpressure is reduced immediately.</li> <li>• Electronic control and colour touch screen.</li> <li>• Power supply 220-240 VAC 50 Hz</li> </ul> Should be supply with; <ul style="list-style-type: none"> <li>• CO<sub>2</sub> Regulator,</li> <li>• High Pressure tube, CO<sub>2</sub> filter,</li> <li>• insufflation tube</li> </ul>  |         |                             |
| 8.            | TELESCOPES  |         |                             |
| 8.1.          | High Definition Straightforward Telescope 0 degree, dia 10 mm, working length (30-36)cm   |         | 2(two)                      |
| 8.2.          | High Definition Forward Oblique Telescope 30 degree, dia 10 mm, working length (30-36)cm  |         | 2(two)                      |
| 8.3.          | High Definition Telescope 0° degree, dia-5 mm working length 30-36 cm)  |         | 2(two)                      |
| 8.4.          | High Definitions Telescope 30° degree, dia-5 mm working length 30-36 cm)  |         | 2(two)                      |
| 9.            | <b>Suction Irrigation unit Compact</b>  |         |                             |
|               | <p>It shall be a combination of suction/irrigation pump for use in gynaecological, laparoscopic and Urology interventions. The adaptation to the correct mode of surgery intended should happen automatically and Manually when the correct type of tubing is used. The insertion of pressure lines into the unit should be simplified for ease of use. The unit should be equipped with electronic, safety circuits that cut the suction/irrigation operation if the unit departs consistently from the present values.</p> <p><b>The suction/irrigation unit should have the following features:</b></p> <ul style="list-style-type: none"> <li>• Easy to user bundle controls for the control of all functionalities.</li> <li>• Touch controls and digital displays ensure safe and precise adjustment of the set values.</li> <li>• During power – up, all system go through an automatic self- test and are only released after a positive result</li> <li>• Safety functions that control any departure from operator settings.</li> </ul> |         | 1 (one)                     |

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| LOT 15-2      | Super specialties   | Surgery | 4k Endovision Tower and Set |
|               |   |         |                             |
|               | <ul style="list-style-type: none"> <li>Automatic recognition of type of procedure intended, when tubing is inserted.</li> <li>Audible alarms in case of malfunction.</li> <li>Suction rate preselect are saved in memory.</li> <li>Should have a suction mode that automatically maintains irrigation pressure and flow constant.</li> </ul> <p><b>The suction/ Irrigation unit should have the following technical specifications:</b></p> <ul style="list-style-type: none"> <li>Power Supply voltage : 100-240 VAC Power frequency: 50-60 Hz</li> <li>Operating conditions: +10<sup>0</sup>c to +40<sup>0</sup>c</li> </ul> <p><b>Irrigation:</b></p> <ul style="list-style-type: none"> <li>Pressure:- Selectable Mode 0.200&amp;0.400 mmHg Flow Rate – Selectable Mode 0-500 &amp;0-1000ml/min Pressure indicator Digital Display Flow indicator Digital Display</li> <li>Certified to IEC 60601.1, CAN/CSA 22.2 No. 601.1-M90:</li> <li>Type of protection against electrical shocks shocks: protection class I</li> <li>Us FDA/ European CE (Issued by a notified body) approved Model should be offered.</li> </ul> |         |                             |
| 10.           | <b>LAPAROSCOPY HAND INSTRUEMNTS</b>   |         |                             |
| 10.1.         | <ul style="list-style-type: none"> <li>Veres needle 120mm including luer lock tube part <b>OR</b></li> <li>Veres needle 150mm including luer lock tube part</li> </ul>  |         | 1 (one)                     |
| 10.2.         | <ul style="list-style-type: none"> <li>Trocar Cannula 10-11 mm diameter with thread and rotating insufflations should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve.</li> <li>It should have stopcock for CO<sub>2</sub> insufflation.</li> <li>The working length of the cannula should be 100mm</li> </ul>   |         | 1 (one)                     |
|               | <ul style="list-style-type: none"> <li>Trocar Cannula 10-11 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock</li> </ul>  |         | 1 (one)                     |

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|               |   |         |                             |
|               | <ul style="list-style-type: none"> <li>for CO<sub>2</sub> gas. The working length of the cannula should be 100mm</li> </ul>   |         |                             |
| 10.3.         | <ul style="list-style-type: none"> <li>Trocar Cannula 5-5.5 diameter with thread and rotating insufflations.</li> <li>Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO<sub>2</sub> insufflation. The working length of the cannula should be 100mm</li> </ul>  |         | 1 (one))                    |
| 10.4.         | <ul style="list-style-type: none"> <li>Trocar Cannula 5-5.5 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve.</li> <li>It should have stopcock for CO<sub>2</sub> insufflation.</li> <li>Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO<sub>2</sub> gas. The working length of the cannula should be 100mm</li> </ul> |         | 1 (one)                     |
| 10.5.         | <ul style="list-style-type: none"> <li>Trocar, pyramidal tip, diam. 10 mm working length 100 mm compatible to cannula</li> </ul>  |         | 1 (one)                     |
| 10.6.         | <ul style="list-style-type: none"> <li>Trocar with blunt tip, diam. 10 mm working length 100 mm compatible to cannula</li> </ul>  |         | 1 (one)                     |
| 10.7.         | <ul style="list-style-type: none"> <li>Trocar, pyramidal tip 5 mm, length 100 mm compatible to cannula</li> </ul>   |         | 1 (one)                     |
| 10.8.         | <ul style="list-style-type: none"> <li>Trocar with blunt tip, diam. 5 mm working length 100 mm compatible to cannula</li> </ul>   |         | 1 (one)                     |
| 10.9.         | <ul style="list-style-type: none"> <li>Reducer, diam. 11, mm to 5,5mm</li> </ul>  |         | 1 (one)                     |
| 10.10.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Maryland dissecting and Grasping Forceps. 360-degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.</li> </ul>   |         | 1 (one)                     |
| 10.11.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic atraumatic autoclavable double window curved Grasping forceps 360-degree rotational sheath, size 5mm length 33-36cm. single action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.</li> </ul>   |         | 1 (one)                     |
| 10.12.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic atraumatic autoclavable Grasping forceps Debakey 360-degree rotational</li> </ul>   |         | 1 (one)                     |



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| LOT 15-2      | Super specialties   | Surgery | 4k Endovision Tower and Set |
|               |   |         |                             |
|               | sheath, size 5mm length 33-36cm. curved double action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.   |         |                             |
| 10.13.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Bowel Grasping forceps double action jaws, fenestrated, 360-degree rotational sheath, size 5mm length 33-36cm. double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.</li> </ul>                              |         | 1 (one)                     |
| 10.14.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360-degree rotational sheath, size 5 mm, length 33-36 cm long double action jaws. Ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul>  |         | 1 (one)                     |
| 10.15.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360-degree rotational sheath, size 10 mm, length 33-36 cm long double action jaws. Ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button</li> </ul> |         | 1 (one)                     |
| 10.16.        | <ul style="list-style-type: none"> <li>Three piece laparoscopic autoclavable claw Grasping forceps with ratchet 2x3 teeth, 360 degree rotational sheath size 10mm length 36 cm long single action jaws, with ergonomic plastic handle can be dismantled with the press of a button</li> </ul>   |         | 1 (one)                     |
| 10.17.        | Three piece automatic laparoscopic autoclavable Babcock Grasping forceps, double action jaws, fenestrated, 360-degree rotational sheath, size 5 mm length 33-36 cm, long double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button.   |         | 1 (one)                     |
| 10.18.        | Three piece automatic laparoscopic autoclavable fenestrated Grasping forceps, double action   |         | 1 (one)                     |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
|               | jaws, fenestrated, 360-degree rotational sheath, size 5 mm length 33-36 cm, long double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button.  |         |                             |
| 10.19.        | Three piece laparoscopic autoclavable Bowel Grasping forceps double action jaws, fenestrated, 360 degree rotational sheath, size 5mm length 33-36cm double action jaws, ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.                      |         | 1 (one)                     |
| 10.20.        | Three piece laparoscopic autoclavable curved METZENBAUM scissors, 360-degree rotational sheath with connector pin for unipolar coagulation m size 5mm length 33-36cm long double action jaws with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button                        |         | 1 (one)                     |
| 10.21.        | Three piece laparoscopic autoclavable Hook scissors, 360 degree rotational sheath, with connector pin for unipolar coagulation size 5mm length 33-36 cm long double action jaws with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button                                    |         | 1 (one)                     |
| 10.22.        | Three piece laparoscopic atraumatic autoclavable dissecting and Grasping forceps with dolphin nose 360 degree rotational sheath with connector pin for unipolar coagulation size 5 mm length 36 cm, double action jaws, ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of a button. |         | 1 (one)                     |
| 10.23.        | Three piece laparoscopic atraumatic grasping forceps jaw throat with wavy tooth edge 360-degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button      |         | 1 (one)                     |
| 10.24.        | Three piece laparoscopic autoclavable Maryland bipolar dissecting and Grasping Forceps. 360  |         | 1 (one)                     |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
|               | degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button   |         |                             |
| 10.25.        | Three piece laparoscopic autoclavable Universal grasping forceps pyramid shaped and cross cutting toothing 360-degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button      |         | 1 (one)                     |
| 10.26.        | Grasping forceps atraumatic clamp axial grooves with fine horizontal serrations, double jaw action, (without HF) diameter 5 mm, WL 31-33cm, springy branches, cpl. consisting of: Handle, sheath tube Insert   |         | 1 (one)                     |
| 10.27.        | Three piece laparoscopic autoclavable mixer grasping and dissection forceps, angled, fine pyramid shaped tooth, 360 degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button |         | 1 (one)                     |
| 10.28.        | Three piece laparoscopic autoclavable spoon forceps, 360-degree rotational sheath, without connector pin for unipolar coagulation size 10 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button  |         | 1 (one)                     |
| 10.29.        | Three piece laparoscopic autoclavable grasping and preparation forceps fine horizontal serrations, fenestrated, 360-degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button |         | 1 (one)                     |
| 10.30.        | High frequency monopolar cord  |         | 1 (one)                     |
| 10.31.        | High frequency bipolar cord  |         | 1 (one)                     |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
| 10.32.        | L-shaped hook electrode with unipolar HF connection  |         | 1 (one)                     |
| 10.33.        | Spatula / Blunt dissector with unipolar HF connection  |         | 1 (one)                     |
| 10.34.        | Needle electrode with unipolar HF connection   |         | 1 (one)                     |
| 10.35.        | Grasping forceps spoon shaped 10 mm, WL 31-33cm  |         | 1 (one)                     |
| 10.36.        | Three piece laparoscopic Bipolar coagulating Grasping Forceps, fenestrated type with overload tissue protection, wide jaws with connector pin for bipolar coagulation 360degree rotational sheath size 5mm length 36cm long, single action jaws ergonomic plastic handle with larger contact area can be dismantled with the press of a button |         | 1 (one)                     |
| 10.37.        | Three piece laparoscopic Bipolar coagulating Grasping Forceps, dolphin nose with overload tissue protection, , wide jaws with connector pin for bipolar coagulation 360degree rotational sheath size 5mm length 36cm long, single action jaws ergonomic plastic handle with larger contact area can be dismantled with the press of a button   |         | 1 (one)                     |
| 10.38.        | Needle holder jaws straight dismantling in to three part namely outer tube handle and inserts, ergonomic pistol handle with disengage able ratchet jaw curved to left size 5mm length 33cm   |         | 1 (one)                     |
| 10.39.        | Needle holder with tungsten carbide insert jaws curved to right dismantling in to three part namely outer tube handle and inserts, ergonomic pistol handle with disengageable ratchet jaw curved to left size 5mm length 33cm  |         | 1 (one)                     |
| 10.40.        | Macro needle holder with tungsten carbide insert, jaws curved to left dismantling in to three parts namely outer tube handle and inserts, ergonomic pistol handle with disengageable ratchet jaw curved to left size 5mm length 33cm   |         | 1 (one)                     |
| 10.41.        | Fascial Closure Instrument for subcutaneous ligature of trocar incisions, size 2.0 mm,   |         | 1 (one)                     |
| 10.42.        | Injection & puncture cannula 5 mm ,WL 31-33cm length with luer lock  |         | 1 (one)                     |
| 10.43.        | Retrieval of foreign body/stones forceps, 10 mm without ratchet length 31-33cm, dismountable into handle, insert & outer tube  |         | 1 (one)                     |
| 10.44.        | Fan shaped retractor-Rotating, 5mm, WL 31-33cm , dismantling facility  |         | 1 (one)                     |

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| LOT 15-2      | Super specialties  | Surgery | 4k Endovision Tower and Set |
|               |  |         |                             |
| 10.45.        | Suction-irrigation tube,5mm with maintenance-free two-way stopcock, thumb control for irrigation and suction wl 27-29cm                              |         | 1 (one)                     |
| 10.46.        | Combination suction and irrigation tube with stop valves,5mm mm 5 mm wl 33 cm  |         | 1 (one)                     |
| 10.47.        | Medium Large clip applicator dismantlable rotating size 100mm, length 36cm, for Titanium clips with ratchet to lock the jaw holding the clip.        |         | 1 (one)                     |
| 10.48.        | Medium Large Hem-O-Lokclip applicator,   |         | 1 (one)                     |
| 10.49.        | Extra Large Hem-O-Lokclip applicator,  |         | 1 (one)                     |
|               | <b>All above items should be USFDA/European CE</b>   |         |                             |
| 10.50.        | trolley standard quality   |         | 1 (one)                     |
| 10.51.        | Cap Washers- for 5 & 10 mm each for cannula and reducers   |         | 50 nos                      |
| 10.52.        | Ring Washers- for 5 & 10 mm each for trocar cannula  |         | 50 nos                      |
| 10.53.        | Container System: Metal & Plastic- For Sterilization and storage of telescopes, hand instruments and other accessories, Different sizes, CE approved |         | 2(two)                      |
| 10.54.        | Formalin Chamber size : 2 " x " x " (L x B x H) with three tray, CE approved   |         | 2(two)                      |
| 10.55.        | Suitable autoclavable plastic tray double tray for sterilization, CE approved  |         | 2(two)                      |
| 10.56.        | UPS 10 KVA, UK BS standard   |         | 1 (one)                     |
| 10.57.        | Cleaning Brush   |         | 10 nos                      |
| 10.58.        | Camera Cover   |         | 100 nos                     |
| 10.59.        | Silicon Spray  |         | 25 nos                      |
| 10.60.        | CO <sub>2</sub> Cylinder 7-9 KG, BOC   |         | 2(two)                      |
| 10.61.        | Clips (Hem-O-Lok)  |         | 2(Box)                      |
| 10.62.        | LT=300 Clips 300   |         | 10(Box)                     |
| 10.63.        | LT=300 Clips 400   |         | 5(Box)                      |
|               | <b>ITEM NO 50 TO 63 SHOULD BE BS/CE APPROVED AND COMPATIBLE TO ALL ABOVE ITEMS</b>   |         |                             |

**LOT 15-3 EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY WITH COMPATIBLE C-ARM SPECIFICATIONS (ELECTRO HYDRAULIC TECHNOLOGY)**

| Item Code No.   | Department        | Section | Item Description   |
|---|-------------------|---------|--|
| LOT 15-3  | Super specialties | Surgery | Extracorporeal Shockwave Lithotripsy with Compatible C-Arm Specifications (Electro Hydraulic Technology) |
| 1. Description  |                   |         |  |
| Lithotripsy Shocks:   |                   |         |  |
| <p>Specification for Extracorporeal Shockwave Variable shocks (pm) 60/75/90.</p> <ul style="list-style-type: none"> <li>Performed as on outpatient procedure.</li> <li>Non invasive</li> </ul> <p>KV Range: 01 KV to 24 KV (effective from 14 KV to 24 KV) in 1 KV/step.</p> <p>Control Panel:</p> <p>A very compact, soft touch control panel having following function &amp; indications required</p> <p>Machine On/Off (with key switch)</p> <ul style="list-style-type: none"> <li>Digital display of KV and shocks</li> <li>KV increase and decrease switches.</li> <li>Shocks selection switch with indicators</li> <li>Shock display reset switch.</li> <li>Mode Selection (Normal and ECG)</li> <li>Shocks start stop switch.</li> <li>Motorized water filling, storage and drain switch.</li> </ul> <p>Shock Wave Generator/Parameter:</p> <p>Principle of Operation: Electro-hydraulic technology/under water spark gap discharge.</p> <ul style="list-style-type: none"> <li>Reflector Opening: 180 mm</li> <li>Spark Gaps: Long Life electrodes</li> <li>Water capacity: 8 litres</li> <li>Shock Wave coupling: Flexible latex membrane</li> <li>Pressure range at F2: 300 to 1200 bars</li> <li>Pre-determined Shocks: 100,500, 1000, 1500, 2000, 2500, 3000, 3500</li> <li>Shocks/Pulses per minute: 60/75/90 pulses/minute</li> </ul> <p>Selection</p> <ul style="list-style-type: none"> <li>Focal Distance: 135 mm</li> <li>Focal Zone: Diameter 4 mm x 12 mm</li> <li>HV Tank: A very compact HV tank filled with high dielectric transformer oil</li> <li>Water storage: with pump.</li> <li>Water drain: with pump.</li> <li>Membrane Filling System: with pump.</li> </ul> |                   |         |  |

| Item Code No.   | Department        | Section | Item Description   |
|---|-------------------|---------|--|
| LOT 15-3  | Super specialties | Surgery | Extracorporeal Shockwave Lithotripsy with Compatible C-Arm Specifications (Electro Hydraulic Technology) |
| <ul style="list-style-type: none"> <li>Operating Temperature: 10° to 30° C</li> </ul> <p>Treatment Table</p> <p>Remote controlled motorized three axis table with radiolucent table top having following movements.</p> <ul style="list-style-type: none"> <li>Up/Down Movement</li> <li>Transverse movement</li> <li>Longitudinal movement</li> </ul> <p>Accessory</p> <ul style="list-style-type: none"> <li>Electrode:– 50 Nos.</li> <li>Membrane:- 3 Nos.</li> <li>Focusing &amp; maintain tools:– 01 set.</li> <li>Jelly:– 05 bottles (20 ml each)</li> </ul> <p>Power Supply:</p> <ul style="list-style-type: none"> <li>Single Phase 230V AC <math>\pm 10\%</math>, 50 Hz with line resist less than 0.4 ohms.</li> </ul> <p>Specification for High End C-Arm System</p> <ul style="list-style-type: none"> <li>C-Arm: High End C-arm with LCD panel &amp; with 1Kx1K CCD or 1k x 1k CMOS Camera 9" Image Intensifier.</li> <li>The unit should be based on digital technology for unparalleled reliability and ease of use.</li> <li>The movements should be smooth having very simple positioning.</li> </ul> <p>X-ray Generator</p> <ol style="list-style-type: none"> <li>High Frequency (40 KHz) X-ray generator with power output at least 5KW or more should be provided.</li> <li>Following modes should be provided. <ul style="list-style-type: none"> <li>Radiography</li> <li>Fluoroscopy</li> </ul> </li> <li>KV range (Rad./ Fluoro): 40 - 120 KV in 1KV/step.</li> <li>Radiographic mA range: at least 100 mA.</li> <li>Fluoroscopy mA output: Up to 3.5mA or more: Up to 15mA or more (High definition mode)</li> <li>mAs output: 250mAs or more in steps.</li> </ol> <p>X-ray Tube:</p> |                   |         |  |

| Item Code No.   | Department        | Section | Item Description   |
|---|-------------------|---------|--|
| LOT 15-3  | Super specialties | Surgery | Extracorporeal Shockwave Lithotripsy with Compatible C-Arm Specifications (Electro Hydraulic Technology) |
| <p>1. Dual focus rotating/stationary anode x-ray tube should be provided with better focal spot at least 0.3 mm or less (small) and 0.6mm or less (Large) should be provided.</p> <p>2. Iris collimator or equivalent collimator technology should be provided.</p> <p>LCD Control Panel:</p> <ol style="list-style-type: none"> <li>LCD Display for following parameters should be provided: <ul style="list-style-type: none"> <li>Minimum 7" inch or more size large display with touch screen on which kV, radiography mAs, fluoro time, FmA II Zoom, error interlock display for KV, mA, thermal etc. are displayed.</li> </ul> </li> <li>Radiographic mode: Manual or APR mode or Auto mode.</li> <li>Timer (Fluoroscopic): Fluoroscopic cumulative timer.</li> <li>Sensor: X-ray tube head temperature sensor for thermal safely cut off.</li> <li>Switches: Mode selector switch. <ul style="list-style-type: none"> <li>Collimator control switches.</li> <li>1.1 Zoom selection switches.</li> <li>Exposure initiation switches for Fluoro/Radiography.</li> </ul> </li> <li>ABS Mode: Automatic Brightness system for fluoroscopy.</li> <li>Self-diagnostic: Various interlocks are displayed on Lock screen or various systems errors.</li> </ol> <p>Stand:</p> <ol style="list-style-type: none"> <li>Motorized Up/down movement: at least 400 mm or more.</li> <li>Horizontal Movement: At least 200 mm.</li> <li>Arc orbital: 90° +30° (120°)</li> <li>Wig wag: ±12.5° (25°)</li> <li>Rotation: ±180° or more.</li> <li>Free space: 700 mm or more</li> <li>Source to image distance: 940mm or more</li> <li>Arc depth: 60 cm or more.</li> <li>Locks: Locks for all the movements</li> <li>Foot Lock: Control stand foot lock.</li> <li>Steering wheel for easy steering &amp; movement should be available.</li> </ol> <p>Image Intensifier TV System:</p> <ol style="list-style-type: none"> <li>9 inches, triple field image intensifier should be provided.</li> <li>High resolution compact CCD camera or CMOS camera of 1K x 1K matrix.</li> </ol> <p>Memory System</p> <p>PC based or embedded memory systems with more than 2000 images storages and the following features should be provided:</p> <ol style="list-style-type: none"> <li>Image processing software with real time image capturing, storage and display in 1K x 1K format in embedded system or PC based.</li> <li>DICOM compatible 3.0 inbuilt with external/internal workstation.</li> </ol> |                   |         |  |



| Item Code No.  | Department        | Section | Item Description   |
|--|-------------------|---------|--|
| LOT 15-3   | Super specialties | Surgery | Extracorporeal Shockwave Lithotripsy with Compatible C-Arm Specifications (Electro Hydraulic Technology) |
| <p>3. Hard disk with storage facility 20000 images or more.</p> <p>4. DICOM CD/DVD inbuilt or external.</p> <p>5. Zoom with pan</p> <p>6. Last image hold</p> <p>7. Image printing</p> <p>8. Flip</p> <p>9. Real time noise reduction recursive filter averaging up to 16 frames</p> <p>10. Connectivity with DICOM 3.0 PACS and HIS on internal or external workstation.</p> <p>11. Preprogramming for image setting for different operating modes.</p> <p>12. Image flipping, image rotation and reversal without radiation.</p> <p>13. WWW level adjustments</p> <p>14. Image inversion</p> <p>15. Patient directory</p> <p>16. Patient data entry</p> <p><b>Monitors</b></p> <p>1. 2 Nos. Medical display high brightness, high contrast, high resolution B/W at least 19" LCD monitors or 1 no. medical display high brightness, high contrast, high resolution colored 24" LCD monitors should be provided.</p> <p>2. High end monitor trolley with foldable arms for monitors and actuator driven height adjustment of monitors should be provided.</p> <p><b>Power supply requirements</b></p> <p>1. Single phase, 240 volts, AC, 15 amps, 50 Hz, <math>\pm 10\%</math> regulation. Independent earthing required on the wall socket adjustment of monitors should be provided.</p> <p><b>Other requirements</b></p> <p>1. The company must be ISO certified.</p> <p>2. The unit should be approved by IAEA/KeNRA.</p> <p><b>Accessories</b></p> <p>1. Cassette Holder:- 1 no. should be provided</p> <p>2. Lead Aprons with all round protection:- 01</p> <p>3. Lead Aprons with front protection:- 01</p> <p>4. Thyroid shield:- 01.</p> |                   |         |  |

#### **LOT 15-4 HOLMIUM LASERS 30 to 35WATTS**

| Item Code No.   | Department                              | Section | Item Description           |
|---|---|---------|----------------------------|
| LOT 15-4  | Super specialties                       | Surgery | Holmium Lasers<br>100watts |
| 1. Description  |   |         |                            |
| 1.1. It should be able to Enucleate, Vaporize and Resect circulated adenoma tissue in BPH treatment of any size.<br>1.2. It should be able to fragment calculi of any size in the bladder, ureter or kidney and any impacted stone fragment.<br>1.3. It should be able to do Stone Dusting.<br>1.4. It should have function of simultaneous fragmentation & suction for PCNL.<br>1.5. It should be able to ablate superficial bladder tumors, urethral & ureteral tumors.<br>1.6. It should be able to treat invasive bladder carcinoma &condylomas and lesions of the external genitalia.<br>1.7. It should have power output of 100watts.<br>1.8. It should be supplied with a Foot switch with Two-foot pedals. Foot pedals should be used for Cut/coag and<br>1.9. Fragmentation/Dusting of Stones.<br>1.10. It should have repetition rate of 5-80Hz.<br>1.11. It should have Energy per Pulse of 0.2 - 6 Joules.<br>1.12. It should have adjustable pulse width.<br>1.13. It should have Greenaiming beam at 532nm, 3 intensity settings.<br>1.14. It should have a Touch Screen Colour Display and should rotate 360 Degrees.<br>1.15. It should be able to control migration of moving calculi to minimize retropulsion.<br>1.16. It should have Fiber & Suction tube support arm.<br>1.17. It should have Voice Confirmation Indicating System's operational status.<br>1.18. It should have Four laser Generators.<br>1.19. It should have a closed loop, self-contained water to air exchanger cooling system.<br>1.20. It should be useable with 200-240 VAC 50/60Hz, <46Amp's Power Supply.<br>1.21. It should be US FDA Approved. |   |         |                            |
| 2. It should be supplied with following accessories:  |   |         |                            |
| 2.1.  | 550 Micron Reusable Flexible Fiber      | 2       |                            |
| 2.2.  | 365 Micron Reusable Flexible Fiber      | 2       |                            |
| 2.3.  | 200micron Reusable Flexible Fiber       | 2       |                            |
| 2.4.  | 550 Micron Side Fire Fiber for Ablation | 2       |                            |

| Item Code No. | Department                              | Section | Item Description        |
|---------------|---|---------|-------------------------|
| LOT 15-4      | Super specialties                       | Surgery | Holmium Lasers 100watts |
| 2.5.          | 550 Micron Stripping and cleaving (set) | 1       |                         |
| 2.6.          | 365 Micron Stripping and cleaving (set) | 1       |                         |
| 2.7.          | 200 Micron Stripping and cleaving (set) | 1       |                         |
| 2.8.          | Fibre Inspection Scope                  | 1       |                         |
| 2.9.          | Scissors                                | 1       |                         |
| 2.10.         | Laser Safety Glasses                    | 2       |                         |
| 2.11.         | Suction Hand piece                      | 4       |                         |

**3. It should have Tissue Morcellator:**

- The Tissue Morcellator should provide rapid endoscopic removal of soft tissue.

**3.1. Tissue Morcellator should include:**

- One control box,
- One Regular hand piece
- One Inverted Hand Piece
- Two blade sets:
  - Outer Blade – Outer Dia up to 4mm
  - Inner Blade – should be compatible to outer blade
- Two piece of sterile tubing
- It should have reusable tissue collection kit
- One package each of 3 long cleaning brushes, 3 short cleaning brushes, and 3 endoscope adaptors.
- It should have Laser Resectoscope & Morceloscope

**3.2. Laser Resectoscope Continuous flow with Morcelloscope consisting of following.**

- Telescope 30 deg, Autoclavable
- Cystoscope 22-23fr.
- One way Bridge
- Inner sheath
- Outer sheath 26fr.
- Laser working Element
- Laser bridge for End fire and Side fire laser fiber
- Continuous flow Laser Cystoscope for side firing fiber.

**3.3. Morcelloscope:**

- Morcelloscope 6-12° 24-26 Fr parallel eyepiece, working length 250mm.
- Capacity 5 mm for auxiliary instruments up to 4.8 mm diameter

**LOT 15-5 HOLMIUM LASERS 120 WATTS**

| Item Code No.  | Department                              | Section | Item Description         |
|--|---|---------|--------------------------|
| LOT 15-5   | Superspecialties                        | Surgery | Holmium Lasers 120 Watts |
| 1. Description   |   |         |                          |
| 1.1. It should be able to Enucleate, Vaporize and Resect circulated adenoma tissue in BPH treatment of any size.<br>1.2. It should be able to fragment calculi of any size in the bladder, ureter or kidney and any impacted stone fragment.<br>1.3. It should be able to do Stone Dusting.<br>1.4. It should have function of simultaneous fragmentation & suction for PCNL<br>1.5. It should be able to ablate superficial bladder tumors, urethral & ureteral tumors.<br>1.6. It should be able to treat invasive bladder carcinoma & condylomas and lesions of the external genitalia.<br>1.7. It should have power output of 120watts.<br>1.8. It should be supplied with a Foot switch with Two-foot pedals. Foot pedals should be used for Cut/coag and Fragmentation/Dusting of Stones.<br>1.9. It should have repetition rate of 5-80Hz.<br>1.10. It should have Energy per Pulse of 0.2 - 6 Joules.<br>1.11. It should have adjustable pulse width.<br>1.12. It should have Greenaiming beam at 532nm, 3 intensity settings.<br>1.13. It should have a Touch Screen Colour Display and should rotate 360 Degrees.<br>1.14. It should be able to control migration of moving calculi to minimize retropulsion.<br>1.15. It should have Fiber & Suction tube support arm.<br>1.16. It should have Voice Confirmation Indicating System's operational status.<br>1.17. It should have Four laser Generators.<br>1.18. It should have a closed loop, self-contained water to air exchanger cooling system.<br>1.19. It should be useable with 200-240 VAC 50/60Hz, <46Amp's Power Supply.<br>1.20. It should be US FDA Approved. |   |         |                          |
| 2. Accessories   |   |         |                          |
| 2.1.   | 550 Micron ReusableFlexible Fiber       | 2       |                          |
| 2.2.   | 365 Micron ReusableFlexible Fiber       | 2       |                          |
| 2.3.   | 200 micronReusableFlexible Fiber        | 2       |                          |
| 2.4.   | 550 Micron Side Fire Fiber for Ablation | 2       |                          |
| 2.5.   | 550 Micron Stripping and cleaving (set) | 1       |                          |
| 2.6.   | 365 Micron Stripping and cleaving (set) | 1       |                          |
| 2.7.   | 200 Micron Stripping and cleaving (set) | 1       |                          |
| 2.8.   | Fibre Inspection Scope                  | 1       |                          |

| Item Code No. | Department           | Section | Item Description            |
|---------------|----------------------|---------|-----------------------------|
| LOT 15-5      | Superspecialties     | Surgery | Holmium Lasers<br>120 Watts |
| 2.9.          | Scissors             |         | 1                           |
| 2.10.         | Laser Safety Glasses |         | 2                           |
| 2.11.         | Suction Hand piece   |         | 4                           |

### 3. It should have Tissue Morcellator:

- The Tissue Morcellator should provide rapid endoscopic removal of soft tissue.

#### 3.1. Tissue Morcellator should include:

- One control box,
- One Regular hand piece
- One Inverted Hand Piece
- Two blade sets:
  - Outer Blade – Outer Dia up to 4mm
  - Inner Blade – should be compatible to outer blade
- Two piece of sterile tubing
- It should have reusable tissue collection kit
- One package each of 3 long cleaning brushes, 3 short cleaning brushes, and 3 endoscope adaptors.
- It should have Laser Resectoscope & Morceloscope

#### 3.2. Laser Resectoscope Continuous flow with Morcelloscope consisting of following.

- Telescope 30 deg, Autoclavable
- Cystoscope 22-23fr.
- One way Bridge
- Inner sheath
- Outer sheath 26fr.
- Laser working Element
- Laser bridge for End fire and Side fire laser fiber
- Continuous flow Laser Cystoscope for side firing fiber.

#### 3.3. Morceloscope:

- Morceloscope 6-12° 24-26 Fr parallel eyepiece, working length 250mm.
- Capacity 5 mm for auxiliary instruments up to 4.8 mm diameter

**LOT 15-6 Treadmill Stress Test Machine**

| Item Code No.   | Department        | Section    | Item Description              |
|---|-------------------|------------|-------------------------------|
| LOT 15-6  | Super specialties | Cardiology | Treadmill Stress Test Machine |
| 1. General Specifications   |                   |            |                               |
| <ul style="list-style-type: none"><li>1.1. System should be PC based</li><li>1.2. The system should be supplied with a compatible NIBP system</li><li>1.3. Should be capable of Integration with Gas Exchange equipment</li><li>1.4. Company should make spares available for the entire life of the system.</li><li>1.5. Quality certifications like ISO-9001:2008, ISO-13485:2012 or equivalent</li><li>1.6. Warranty for at least two(2) years and CMC for at least five(5) years post warranty.</li></ul>   |                   |            |                               |
| 2. Specification for Acquisition / Stress Test Software   |                   |            |                               |
| <ul style="list-style-type: none"><li>2.1. Automatic Arrhythmia detection, print &amp; capture : VBP and SVPB</li><li>2.2. Real time and retrospective J Point and isoelectric identification</li><li>2.3. User initiated and automatic capture of events</li><li>2.4. User defined Exercise Protocols</li><li>2.5. Real time Super imposition QRST Complex</li><li>2.6. Should acquire data from 12 Lead simultaneously</li><li>2.7. Should have notch filter around 50 Hz</li><li>2.8. Retrospective ECG &amp; Arrhythmia analysis even during Test</li><li>2.9. Scroll back during the Test</li><li>2.10. Should be capable of displaying real-time or stored ECG tracings.</li><li>2.11. Should display and regularly update ECG 12 leads, 12 medians, 1 expanded median, HR, BP, METS, Stage time, test time, protocol name, stage name, speed and grade of treadmill.</li><li>2.12. Should have automatic stage print out facility at the end of each exercise</li><li>2.13. Should have capability to display real-time ST running trend.</li><li>2.14. Should have ability to display trend graph for HR, BP, ST level, ST slope and J amplitude</li><li>2.15. Should have automatic detection, display, storage and review of rhythm events</li><li>2.16. Should be able to display ECG in various formats like 3 Lead + 12 Median; 6 Lead + 12 Median; 12 Lead + 12 Median</li><li>2.17. Should have base line correction (BLC) for stable baseline during test</li><li>2.18. Should run various test protocols like Bruce, Modified Bruce, Balke, Ellested, Naughton and user defined protocols.</li></ul> |                   |            |                               |

| Item Code No.   | Department        | Section    | Item Description              |
|---|-------------------|------------|-------------------------------|
| LOT 15-6  | Super specialties | Cardiology | Treadmill Stress Test Machine |
| <p>2.19. Acquisition and analysis softwares should be upgradable to latest version free of cost</p> <p>2.20. Should have capability to import patient data from HIS and also manually edit/add data of patient</p> <p>2.21. Raw data from software should be made available in standard formats for further analysis with softwares like MATLAB.</p> <p>2.22. Should be able to print report in PDF format.</p> <p>2.23. Should be able to print reports with standard Laser printers on A4 Plain sheets.</p>   |                   |            |                               |
| <p><b>3. Specifications for treadmill</b></p> <p>2. Treadmill should have:</p> <ul style="list-style-type: none"> <li>a) Fully interfaced - controllable from software and Non interfaced – Independent mode with Programmable Controller</li> <li>b) Controllable speed of 0.16-24 Km/H</li> <li>c) Variable inclination (grade) from 0 – 25%</li> <li>d) Adequate walking area ~ 1600 mm X 560 mm</li> <li>e) Controlled by optically isolated RS 232 or USB</li> <li>f) Heavy duty AC motor 4 HP (6 HP peak) drive</li> <li>g) Emergency stop feature</li> <li>h) Power requirement 240 V,50 Hz, 15 A</li> </ul> |                   |            |                               |
| <p><b>4. Specification for computer</b></p> <p>System should be supplied with Trolley mounted branded all in one PC which should have:</p> <ul style="list-style-type: none"> <li>a) At least core i7 processor, 16GB RAM, 1TB Hard Disk, DVD Drive, ~19” LED display or higher configuration.</li> <li>b) Windows 8/10 (64 bit) Operating System.</li> <li>c) Color Laser Printer for printing on A4 Sheets.</li> <li>d) 1 KVA UPS for Computer.</li> <li>e) Should be supplied with required standard accessories including 500 piece of disposable ECG Electrodes.</li> </ul>                                    |                   |            |                               |

**LOT 15-7 Urodynamics**

| Item Code No.  | Department        | Section | Item Description |
|--|-------------------|---------|------------------|
| LOT 15-7   | Super specialties | Urology | Urodynamics      |
| 1. General Specifications<br>Advance Urodynamic Equipment with following specifications:   |                   |         |                  |
| <p>Advance Integrated Video Urodynamic System</p> <ol style="list-style-type: none"> <li>1.1. The system should have the facility to perform Uroflowmetry, Cytometer, Pressure Flow Studies, EMG Studies, EMG Biofeedback &amp; Video Urodynamic studies</li> <li>1.2. System should be fully upgradable with Technical advances in future</li> <li>1.3. Should have minimum 5-8 Configurable channels and should be able to display up to at least 10 channels. Should have 3 regular channel &amp; two spare channels for profile applications like UPP &amp; Anorectal manometry.</li> <li>1.4. Should be able to attach 3 Pressure Transducers, Radio frequency/ Bluetooth based weight flow channel. Colour coded labels and cable (Vesicle, Abdominal and Urethral channels).</li> <li>1.5. Should have auto 80 -100 mmHg test/calibration button for checking the transducers. Fitted to bracket/clamp. Transducer should be reusable having pressure range (-50-350 mmHg)</li> <li>1.6. Should have Automatic Air Pump for profile applications like UPP &amp; ARM. Should have integrated infusion Sensor / Infusion transducer to check correct infused volume.</li> <li>1.7. Should have infusion volume up to 2000ml and software-based calibration control. And should measure infusion volume through infusion Sensor / Infusion transducer and not through rotation of pump.</li> <li>1.8. Should have infusion pump 4 roller or more, software control (start/stop &amp; speed selection) Cystometry: Filling and Voiding <ul style="list-style-type: none"> <li>• Integrated filling pump and volume sensor</li> <li>• Infusion pump speed: flow speed 1ml/ minute -100 ml/minute or more</li> <li>• Compliance and pressure volume plot</li> <li>• ICS, Schaffer and Abrams-Griffith's pressure flow Nomo grams</li> </ul> </li> <li>1.9. Should have facility to attach 2 Uroflow transducers.</li> <li>1.10. Should be supplies with one wired and wireless RF/Bluetooth/JIGBEE/XBEE Based Weight uroflow transducer with flow range of 0-50ml/sec, volume range up to 2000ml.</li> <li>1.11. Must have auto record and zero facility for uroflowmetry. Should have auto artifact detection. It should be supplied with height adjustable commode chair one and height adjustable uroflow stand one.</li> <li>1.12. Should be supplied with security cover for Flow transducers to protect from water spillage.</li> </ol> |                   |         |                  |



| Item Code No.   | Department        | Section | Item Description |
|---|-------------------|---------|------------------|
| LOT 15-7  | Super specialties | Urology | Urodynamics      |
| <p>1.13. Should be supplied with 1 channel wireless EMG, should be compatible with surface electrodes, needle electrodes.</p> <p>1.14. Should have Raw &amp; Average EMG with sound. Should have facility to adjust sound, gain &amp; Threshold.</p> <p>1.15. The system should be supplied with trolley to fit the complete UDS along with PC having waterproof keyboard &amp; touch pad.</p> <p>1.16. Should be supplied with at least 22" -2 LED colour flat monitor for display mounted on a trolley.</p> <p>1.17. Should be adjustable in height and angle. Console should be completely inside the trolley to protect from water spillage.</p> <p>1.18. Should have all in one PC with optical mouse, microphone &amp; Speaker for EMG. Should be supplied with UPS of suitable rating for minimum 15 Minute back up.</p> <p>1.19. Computer should run on Windows 10 or latest having at least 16GM RAM and 1TB GB SSD / HDD and 1 TB External HDD &amp; 4GB Graphic Card. Should be supplied with Color Laser Printer &amp; UPS of suitable ratings with Minimum 30 Min back up.</p> <p>1.20. Should be supplied with height adjustable micturition chair with folding arm rest for Urodynamic Studies.</p> <p>1.21. Should be supplied with Micturition stand-voiding studies, height adjustable, removable funnel</p> <p>1.22. Should be supplied with EMG biofeedback software with Wireless EMG module for pelvic floor training. Should have ICS standard games,</p> <p>1.23. Should be supplied with 3D bladder scanner for calculation of post void residual.</p> <p>1.24. Should be US FDA or European CE approved with 4-digit Certified body</p> <ul style="list-style-type: none"> <li>• Should be supplied with Digital Videourodynamic software for doing Video Urodynamic studies. Should be able to capture images &amp; make small videos &amp; can be synchronized with Urodynamic traces</li> <li>• System should be supplied with Three motors carbon fiber top C-ARM compatible Chair for Top to Toe imaging.</li> <li>• Versatile eight positioning, controlled with remote to do Video Urodynamic studies in Sitting, Supine &amp; Standing position.</li> <li>• Should allow patient to remain in one place for preparation, filling and voiding phase.</li> <li>• Avoid risk of catheters falling out or getting misplaced during transfer or ambulation.</li> <li>• Should have attachments for Uroflow &amp; funnel.</li> <li>• Should have Arm rest, footrest, Leg rest &amp; Cushion.</li> </ul> |                   |         |                  |

| Item Code No.  | Department        | Section | Item Description |
|--|-------------------|---------|------------------|
| LOT 15-7   | Super specialties | Urology | Urodynamics      |
| <ul style="list-style-type: none"> <li>• Should have four double wheel rolling caster to offer unencumbered manoeuvrability.</li> <li>• Weight capacity up to 250 Kg in standing position. Should be IPX6 rated for 'Protection against water incursion'.</li> <li>• Should be European CE/EC with digit or US FDA approval.</li> </ul> <p>1.25. Optional items - Prices to be quoted separately for following &amp; will be freezed for 5 years.</p> <ul style="list-style-type: none"> <li>i) 4 Channel Anorectal Manometry</li> <li>ii) Ambulatory Urodynamics with reusable catheter having Live streaming facility and Leak Point detection</li> <li>iii) Near Infrared spectroscopy (NIRS) to establish co-relation with Uds Findings during foiding Cystometry</li> <li>iv) Channel Oesophageal Manometry. Should be supplied with Urodynamic software with following facility</li> <li>v) UPP Puller with stand &amp; software for doing Urethra pressure profilometry</li> <li>• Windows platform, unlimited number of templates</li> <li>• Standards and terminology as according to the ICS (International Continence society) monograms, PURR, Paediatric, Siroky, Abrams-Griffiths</li> <li>• Connectivity to Hospital information system and DICOM worklist &amp; DICOM storage</li> <li>• Event markers-user Colorable toolbars, and event markers (icons and/or text)</li> <li>• Technology for Data recovery even when studies have not been saved.</li> <li>• Real time data processing and on-line storage</li> <li>• Back up manually or automatically to any location</li> <li>• Intelligent patient search</li> <li>• System should be operational on windows 10 or Latest</li> <li>• Should have 8GB RAM &amp; 512GB SSD or 1TB HDD.</li> <li>• Waterproof Key board with optical mouse and DVD/CD re-writable drive.</li> <li>• 1-18 Points for test setting as per customer choice</li> <li>• Report in MS Word or in PDF Format</li> <li>• Post procedure editing in Word format of report</li> <li>• Playback facility of test after the procedure</li> </ul> |                   |         |                  |

| Item Code No.  | Department        | Section | Item Description |
|--|-------------------|---------|------------------|
| LOT 15-7   | Super specialties | Urology | Urodynamics      |
| <p>1.26. Should be supplied with following:</p> <ul style="list-style-type: none"> <li>• Dual Lumen Catheter for Cytometer 7/ 8 Fr. – 30 No</li> <li>• Dual Lumen Catheter for Cystometry 5/6 Fr. – 10 Nos</li> <li>• Pigtail Catheter, PVC, 5/6Fr and bladder filling – 10 Nos</li> <li>• Dual Lumen Abdominal Rectal Balloon catheter for Cystometry – 50 Nos</li> <li>• Pump Tubing – 50 Nos</li> <li>• Collection Beaker – 10 Nos</li> <li>• Reusable pressure Transducer – 5 Nos</li> <li>• EMG patch Electrodes – 200 Pcs</li> <li>• Connection/ Measurement Tubings – 50Nos</li> <li>• Domes for reusable pressure transducers – 25Nos</li> </ul> <p>1.27. The Urodynamic System should have US FDA / European CE with digit certified body approval.</p> <p>1.28. Bidder should have experience of Establishing Video Urodynamic Lab at least at two premier institutions in the country and/or the region in the last three Years &amp; supply order copy with performance to be attached.</p> <p>1.29. System Should be supplied with at least two (2) years warranty.</p> <p>1.30. Firm should quote rates for CMC for 5 years after warranty period.</p> <p>1.31. Firm should quote rates of all consumables/spares/accessories &amp; will be frozen for at least 5 years.</p> |                   |         |                  |

**LOT 15-8 – Brachytherapy Unit**

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
| <b>General description</b>  |   |                    |                    |
| <b>Technical Specifications</b>   | <ul style="list-style-type: none"> <li>Radioactive Source – Brachytherapy Unit</li> <li>Iridium-192, metallic</li> <li>Cylindrical configuration</li> <li>Iridium-192 pellet- HDR: 0.6 mm diameter, 3.5 mm active length; PDR: 0.6 mm diameter, 0.5 mm active length</li> <li>Capsule- HDR: 0.9 mm diameter, 4.52 mm length; PDR: 0.9 mm diameter, 2.97 mm length</li> <li>Nominal activity- HDR: 370 GBq (10 Ci)*; PDR: 37 GBq (1 Ci)</li> <li>Air Kerma Rate (HDR): 0.063 Gy/h (<math>\pm 5\%</math>) for 555 GBq at 1 m</li> </ul> |                    |                    |
| <b>Source cable</b>   | <ul style="list-style-type: none"> <li>Iridium-192 source encapsulated in stainless steel</li> <li>Capsule welded to a flexible stainless steel cable</li> <li>Distance from distal cable tip to the beginning of the active pellet- HDR: 0.67 mm; PDR: 2.07 mm (To ensure consistent “cable tip to source center” distance for HDR and PDR sources)</li> <li>Cable diameter: 0.9 mm</li> <li>Maximum extension length: 130 cm</li> <li>The most distal 200 mm section of the cable is an ultraflexible cable.</li> </ul>             |                    |                    |

| Item Code No.   | Department   | Section            | Item Description   |
|---|--|--------------------|--------------------|
| LOT 15-8  | Oncology   | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |  |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS   | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>Source manufactured according to ISO1677, ISO2919, ISO/TR4826, ISO9978 resulting in ISO source classification: C63333</li> </ul>  |                    |                    |
| <b>Transportable options</b>  | <ul style="list-style-type: none"> <li>Transportation Options system has been qualified as a Type A shipping container.</li> <li>Afterloader capacity that can be converted to a transportable system for use in multiple locations.</li> </ul>  |                    |                    |
| <b>Afterloader</b>  | <p>Meets the commitments of the following standards:</p> <ul style="list-style-type: none"> <li>Electrical safety of medical devices standard IEC 60601-1</li> <li>Collateral standards of IEC 60601-1 specific to afterloaders IEC 60601-2-17 • IAEA and US DOT-7A.</li> </ul>                    |                    |                    |
| <b>Cable and drive parameters</b>   | <ul style="list-style-type: none"> <li>Nominal cable speed zero slip: approximately 60 cm/s</li> <li>Source positioning accuracy: <math>\pm 1</math> mm relative to the indexer</li> </ul>   |                    |                    |
| <b>Source placement</b>   | <ul style="list-style-type: none"> <li>Treatment channels</li> <li>Dwells per channel</li> <li>Step size: default 5 mm, programmable from 1-10 mm, in 1 mm increments</li> <li>Minimum radius of curvature at the distal end of the catheter: 1.3 cm in a ring probe of diameter 2.6 cm</li> </ul> |                    |                    |

| Item Code No.   | Department   | Section            | Item Description   |
|---|--|--------------------|--------------------|
| LOT 15-8  | Oncology   | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |  |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS   | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | and in a 5 Fr bronchial catheter <ul style="list-style-type: none"> <li>Method of source movement: commences at most distal dwell positions and steps back</li> </ul>  |                    |                    |
| <b>Afterloader shielding</b>  | <ul style="list-style-type: none"> <li>Safe material: Tungsten</li> <li>Maximum storage capacity of safe: 555 GBq (15 Ci)</li> <li>Maximum Air Kerma Rate 1 m from afterloader: does not exceed 3 <math>\mu</math>Gy/h for maximal load</li> <li>Radiation shielding: Conforms to International</li> <li>Electrotechnical Commission requirements (IEC 60601-2-17) ICRP codes and applicable NRC standards in the USA</li> </ul> |                    |                    |
| <b>Room shielding</b>   | <ul style="list-style-type: none"> <li>Controlled by local codes and conditions of operation</li> <li>Approximately 4 cm of lead or 35 cm of concrete is generally required</li> </ul>   |                    |                    |
| <b>Electrical Power Requirements</b>  | <ul style="list-style-type: none"> <li>System power rating: 240V / 50 Hz models available; 100 VA</li> <li>In the event of a power failure, the afterloader is powered through the internal batteries to allow the source to retract to the safe.</li> </ul>   |                    |                    |
| <b>Environmental requirements</b>   | <ul style="list-style-type: none"> <li>Operating temperature range: +15 to +35°C</li> <li>Humidity range: 30% to 75% (non-condensing)</li> </ul>   |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>36.1.3 Air pressure: 70 kPa - 110 kPa</li> <li>36.1.4 Weight &amp; dimensions 130 kg 105 cm H x 51 cm W x 57.5 cm D</li> </ul>   |                    |                    |
| <b>Equipment classification</b>   | <ul style="list-style-type: none"> <li>Type of protection against electric shock: CLASS I</li> <li>Degree of protection against electric shock: TYPE B</li> <li>Degree of protection against harmful ingress of water: IP 40</li> <li>Equipment not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide</li> <li>Class of operation: CONTINUOUS</li> </ul> |                    |                    |
| <b>Safety equipment (emergency container)</b>                                 | <ul style="list-style-type: none"> <li>Emergency source container is designed to hold most applicators directly</li> <li>38.1.2 Minimum shielding: 26 mm lead</li> <li>38.1.3 Minimum diameter (inner plastic container): approximately 60 mm</li> <li>38.1.4 Container height (internal): 270 mm</li> </ul>  |                    |                    |
| <b>Brachytherapy Commissioning</b>  |   |                    |                    |
|   | <ul style="list-style-type: none"> <li>Bidder will help in selection of essential radiation dosimetry and equipment and Quality Assurance equipment required for commissioning and continuing the Quality Brachytherapy as per</li> </ul>   |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | international standards.  |                    |                    |
| <b>Scope of Services</b>  | <ul style="list-style-type: none"> <li>Bidder, along with local radiotherapy team will perform the acceptance of the Brachytherapy unit using manufacturer protocol.</li> <li>The team will also perform detailed Electrical, Mechanical and Radiation checks during commissioning.</li> <li>All the applicators will be checked mechanically, and Autoradiograph will be performed for all applicators to verify the source positional accuracy within the applicator.</li> <li>Bidder team will submit the complete acceptance test report to the Project Implementation Team.</li> </ul> |                    |                    |
| <b>Radiation Safety Survey during source loading</b>                          | <ul style="list-style-type: none"> <li>Bidder's Radiation Safety Officer (RSO) and team will perform detailed radiation leakage tests on the Brachytherapy treatment unit head and perform radiation survey around the installation as per IAEA Safety code for radiotherapy, to ensure the safety of the patient, public, radiation workers and the hospital before starting treatment.</li> <li>During first source loading, the bidder will perform detailed</li> </ul>  |                    |                    |



| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <p>radiation leakage tests on the Brachytherapy treatment unit head and perform radiation survey around the installation to ensure the safety of the patient, public and radiation workers.</p> <ul style="list-style-type: none"> <li>• Bidder's RSO will formulate procedures for safe handling of radioactive isotopes from the moment it is received at the hospital.</li> <li>• The new source container upon receipt at the hospital will be surveyed and inventory will be made for safety and regulatory concerns.</li> </ul> |                    |                    |
| <b>Regular Quality Assurance Procedures</b>                                   | <p><b>Daily Quality Assurance</b></p> <ul style="list-style-type: none"> <li>• Source Activity/Decay</li> <li>• functioning of Door Interlock</li> <li>• Treatment interruption and recovery</li> <li>• Radiation Survey meters functionality check o Gamma area monitors functionality check.</li> </ul>   |                    |                    |
|   | <p><b>Source loading Quality Assurance</b></p> <ul style="list-style-type: none"> <li>• Electrical, Mechanical and Radiation Checks will be performed after each source loading. o Radiation leakage survey of treatment unit and installation,</li> <li>• Source positional accuracy using auto radiographs</li> </ul>   |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>• Calibration of radioactive source against reference.</li> <li>• Temporal accuracy - Timer linearity and end error, against reference.</li> <li>• Swipe test of applicators</li> <li>• Then new source data will be entered in to the Treatment planning system and treatment times will be calculated and verified with a reference test patient               <ul style="list-style-type: none"> <li>o Mechanical Integrity of applicators,</li> </ul> </li> <li>• Source positional accuracy— autoradiograph o Emergency interlocks and recovery of treatment after interruption.</li> </ul> |                    |                    |
|   | <b>Treatment Planning System (TPS) QA.</b> <ul style="list-style-type: none"> <li>• Digitizer-Accuracy of digitization of point Co-ordinates.</li> <li>• Calculation Algorithm               <ul style="list-style-type: none"> <li>o Source specification required for TPS</li> <li>o Initial activity quoted by the supplier</li> </ul> </li> <li>• Agreement of source decay corrections</li> <li>• Agreement between TPS and published/</li> <li>• manual calculation for single source, at relevant points</li> </ul>  |                    |                    |
| <b>Clinical Implementation</b>  | <b>Patient Immobilization</b><br>Bidder will establish site specific immobilization protocol to perform <ul style="list-style-type: none"> <li>• Head&amp; Neck</li> <li>• Thorax</li> </ul>  |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>• Abdomen</li> <li>• Pelvis</li> <li>• Extremities</li> <li>• Special procedures SRS, SRT, SBRT, Hemi body, craniospinal, mantle field technique, Total Body irradiation</li> <li>• Patient preparation</li> <li>• selection of immobilization devices</li> <li>• Setup notes and documentation</li> <li>• Protocol for CT image acquisition for Radiotherapy planning</li> <li>• Protocol for MRI &amp; PETCT image acquisition for Radiotherapy planning</li> <li>• Hands on Training of RT procedures</li> <li>• Setting up protocol for special procedures.</li> </ul> |                    |                    |
|   | <b>Planning Simulation</b> <ul style="list-style-type: none"> <li>• Bidder will assist the local team to perform the required CT simulation for all the new cancer patients so that they can be taken up for the further contouring treatment planning and delivery.</li> </ul>   |                    |                    |
|   | <b>Treatment Planning</b> <ul style="list-style-type: none"> <li>• Bidder will perform treatment planning<br/>Selection of treatment technique<br/>Selection of modality and energy <ul style="list-style-type: none"> <li>○ Selection of field directions for complex</li> </ul> </li> </ul>   |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | field arrangements <ul style="list-style-type: none"> <li>○ Shaping of fields</li> <li>○ Computation of dose distribution and verification of accuracy</li> <li>○ Dose volume histogram</li> <li>○ Clinical Implementation of 3DCRT, IMRT, VMAT, IGRT &amp; SRS/SRT (If available)</li> <li>○ VMAT - Planning &amp; Implementation</li> </ul> |                    |                    |
|   | <b>Fabrication of Treatment Aids</b> <ul style="list-style-type: none"> <li>• Bidder team will assist the local team to create custom made block electron blocks.</li> </ul>  |                    |                    |
|   | <b>Simulation of Treatment</b> <ul style="list-style-type: none"> <li>• Radiographic documentation of treatment ports.</li> <li>• Bidder will assist and teach the local team to check and approve every image of the treatment site at treatment machine prior to treatment of individual patient</li> </ul>                                 |                    |                    |
|   | <b>Treatment</b> <ul style="list-style-type: none"> <li>• Transfer of treatment data to the treatment machine</li> <li>• Initial verification of treatment set-up.</li> <li>• Verification of accuracy of repeated treatments.</li> </ul>   |                    |                    |

| Item Code No.   | Department   | Section            | Item Description   |
|---|--|--------------------|--------------------|
| LOT 15-8  | Oncology   | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |  |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS   | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>Continual assessment of equipment performance</li> <li>Periodic check protocol</li> </ul>   |                    |                    |
| <b>Training</b>   | <p>1) The vendor should provide comprehensive training delivered by application specialists for the linear accelerators done on site during installation and to the full of the Department of Radiotherapy. The training period should be at least for four weeks or more.</p> <p>2) Training in a well-advanced centre for two Radiation Oncologists, two Medical Physicists and two Radiotherapy Technicians for two weeks should be provided for the staff.</p> <p>3) Maintenance/service training should be provided for two Biomedical Service Engineers at the manufacturer's factory for not less than two weeks.</p> |                    |                    |
| <b>Equipment Support and Services</b>   | The bidder should provide a warranty and support plan cover for the first 2 years and optional warranty support for year 3, year 4, year 5 and year 6  |                    |                    |
| <b>Immobilization package</b>   | Immobilization and Essential Accessories to be Included with the Unit<br>The supplier should include the following key accessories at a minimum:-  |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
| <b>Carbon Fiber Immobilization Devices:</b>                                   | Carbon fiber standard baseplates (2), carbon fiber head and shoulder baseplate (2), foam head support (18 pieces), acrylic prone baseplate (1), carbon fiber wingboard (2) carbon fiber breast board (2), carbon fiber belly board (2), foam knee rest (2), foam foot rest (2), water tank (1), vacuum pump (1) and table index bar (6).  |                    |                    |
| <b>Accessories and Thermoplastic Masks:</b>                                   | Thermoplastic head mask (50), thermoplastic head and neck mask (40), thermoplastic head and shoulder mask (40), thermoplastic head mask IMRT (20) thermoplastic head and neck mask IMRT (20), thermoplastic head and shoulder mask IMRT (20), thermoplastic breast mask (20), thermoplastic pelvis mask (20), vacuum bags >40 x 60cm (4), vacuum bags >60 x80cm (4), bolus 0.5 and 1cm (3 each), skin markers (3) and CT markers (3).<br><ul style="list-style-type: none"> <li>- Head Base plate</li> <li>- Head support set, position "supine"</li> <li>- Head support, position "prone"</li> <li>- Head thermoplastic masks</li> <li>- Head and Neck thermoplastic masks</li> <li>- Head and Shoulder thermoplastic masks</li> <li>- Carbon fiber wingboard</li> </ul> |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | <ul style="list-style-type: none"> <li>- Immobilization board for treating breast and thorax with precise hand immobilization</li> <li>- Thermoplastic breast mask</li> <li>- Base plate for Abdomen and Pelvis made of carbon fiber</li> <li>- Thermoplastic mask for Abdomen and Pelvis</li> <li>- Knee support device</li> <li>- Foot support device</li> <li>- Whole body immobilization vacuum bags 70/100cm</li> <li>- Whole body immobilization vacuum bags 50/70cm</li> <li>- Vacuum bags for special size order</li> <li>- Bolus 0.5cm</li> <li>- Bolus 1cm</li> <li>- Table index bar</li> <li>- Water bath for thermoplastic masks heating</li> <li>- Vacuum pump</li> </ul> |                    |                    |
| <b>Dosimetry Package</b>  | <p>The dosimetry serve system beam performance should meet internationally acceptable standards. The stable time for beam output should not be &gt;0.5sec and the dose stability error not &gt;2% in 5 days. The system should allow for a safety interlock activation when longitude and lateral beam symmetry is =&gt;2%. The ionization chamber should have a 4-channel structure.</p> <p>The system should include the following: water phantom, control</p>  |                    |                    |

| Item Code No.   | Department  | Section            | Item Description   |
|---|---|--------------------|--------------------|
| LOT 15-8  | Oncology  | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |   |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS  | COMPLY(YES/NO)     | OFFERING/REFERENCE |
|   | software, dual channel electrometer, extradin ion chamber, electric lift table, calibration therapy ion chamber, calibration electrometer barometer, thermometer and a laptop.  |                    |                    |
| <b>Features</b>   | Blue Phantom2 3D Water Phantom System 1997-105 - OmniPro-Accept Advanced Acquisition and analysis software version 7 1997-120<br>- OmniPro-Accept v. 7 RTPS i/f   |                    |                    |
| <b>Module for RTPS specific measurement</b>                                   | Triaxial ion chamber/diode detector cable (low noise), 5m on cable reel,<br><br>Water phantom carriage, manually operated, including leveling frame<br>Water reservoir carriage with uni-directional pump, power supply 230V<br><br>Detector holder for CC and FC chambers as well as third party detectors with a diameter of 10 mm to 15 mm<br><br>Ionisation chambers DS02-000 CC13 Ion chamber: 0.13 ccm, shonka plastic, waterproof, TNC triax, 30 mm diameter for 4 - 6 MV photon and 8 - 12 MeV electron, 60 mm diameter for 15 – 20 MV photon |                    |                    |
| <b>Reference electrometer</b>   | DOSE 1 Therapy Dose Meter Standard Version<br>Triaxial ion chamber cable (low noise) thick version, 18 m on cable reel, TNC triax connector FC65-P "Farmer" type ion chamber: 0.65 ccm, POM, waterproof, TNC triax  |                    |                    |



| Item Code No.   | Department   | Section            | Item Description   |
|---|--|--------------------|--------------------|
| LOT 15-8  | Oncology   | Brachytherapy Room | Brachytherapy Unit |
| 1. General Specifications<br>Brachytherapy unit complete with Planning system |  |                    |                    |
| ITEM  | PERFORMANCE SPECIFICATIONS   | COMPLY(YES/NO)     | OFFERING/REFERENCE |
| <b>Check sources</b>  | Radioactive Check Device type CDC for cylindrical detectors<br>Adapter for use of "Farmer" type chambers with CDC radioactive check dev<br>Adapter for use of CC type chambers with CDC radioactive check device |                    |                    |
| <b>Plates phantom</b>   | SP34 Plate phantom consisting of 33 RW3 plates including storage Case RW3 Adapter plate for CC13 RW3 Adapter plate for FC65-P/FC65- G "Farmer" type, PTW 30010/30012 and NE 2571/2581                            |                    |                    |
| <b>Isocenter check device</b>   | Base plate Disk phantom for isocenter check (base plate (item SA27000) required)   |                    |                    |
| <b>Thermometer and barometer</b>  | C300 Digital Barometer C100 Laboratory Thermometer   |                    |                    |

#### LOT 15-9- Brachytherapy Table

| Item Code No.  | Department | Section                            | Item Description    |
|--|------------|------------------------------------|---------------------|
| LOT 15-9   | Oncology   | Brachytherapy Room                 | Brachytherapy Table |
| 1. General Description   |            |                                    |                     |
| Operating table suitable for use in theatre for major operations. It should be capable of performing lateral tilt, up-down movement, trendelenburg and reverse trendelenburg position, back section refraction and kidney bridge.<br>The movement should be electrohydraulic with manual option control system |            |                                    |                     |
| 2. Composition   |            |                                    |                     |
| 2.1.   | Main unit  |                                    |                     |
| 3. Physical Specifications   |            |                                    |                     |
| 3.1.   | Main Unit  |                                    |                     |
| 3.1.1.   | Table top  | Approx. Length 2000 X width 600 mm |                     |
| 3.1.2.   |            | X-ray Permeable                    |                     |

| Item Code No. | Department                    | Section  | Item Description    |
|---------------|-------------------------------|--|---------------------|
| LOT 15-9      | Oncology                      | Brachytherapy Room   | Brachytherapy Table |
| 3.2.          | Head rest                     | Detachable   |                     |
| 3.3.          | Leg rests                     | Detachable/separable   |                     |
| 3.4.          | Material of main unit         | Made of scratch resistant, hard wearing and easy to clean material   |                     |
| 3.5.          | Height of table top           | Adjustable, mechanical operated, 600mm to 1100mm   |                     |
| 3.6.          | Table top movements           |  |                     |
| 3.6.1.        | Trendelenburg                 | Forward: 25°, Reverse: 25°   |                     |
| 3.6.2.        | Lateral – tilt                | ~20° both to the left and right  |                     |
| 3.6.3.        | Back- section refraction      | 90°  |                     |
| 3.6.4.        | Table top turn                | 180°   |                     |
| 3.6.5.        | Main unit movements           | Mobile with antistatic castors with braking mechanism  |                     |
| 3.7.          | Maximum load weight           | 250 Kg   |                     |
| 4.            | Accessories                   | To be provided as startup kits.  |                     |
| 4.1.          | Mattress                      | High density type easy to clean, 3” thickness with 4 sections, breathable, waterproof that does not stick to the table |                     |
| 4.2.          | Arm board with mattress       | 1 piece  |                     |
| 4.3.          | Shoulder support with pads    | 2 pieces   |                     |
| 4.4.          | Foot board                    | 1 set  |                     |
| 4.5.          | Knee crutches                 | 2 pieces   |                     |
| 4.6.          | Screen frame                  | 1 piece  |                     |
| 4.7.          | Body support with pads        | 2 pieces   |                     |
| 5.            | I. V. pole, adjustable height | 1piece   |                     |
|               | Orthopedic attachment         | 1 piece  |                     |
| 5.1.          | Manufacturing standards       | ISO 13485, ISO 9001  |                     |
| 5.2.          | Product conformity standards  | EU-93/42/EEC, CE and FDA approved  |                     |
| 6.            | Delivery point                |  |                     |
| 6.1.          | See hospital schedule         | For Delivery, inspection and commissioning   |                     |
|               |                               |  |                     |

**Drawn by:**

Name: .....

Signature .....Date: .....

**Reviewed by:**

Name..... Signature .....Date .....

Name..... Signature .....Date .....

Name..... Signature .....Date .....

**Confirmed by:**

1. Name: Signature.....Date .....

2. Name: ..... Signature..... Date.....

3. Name.....Signature.....Date.....