

Dental

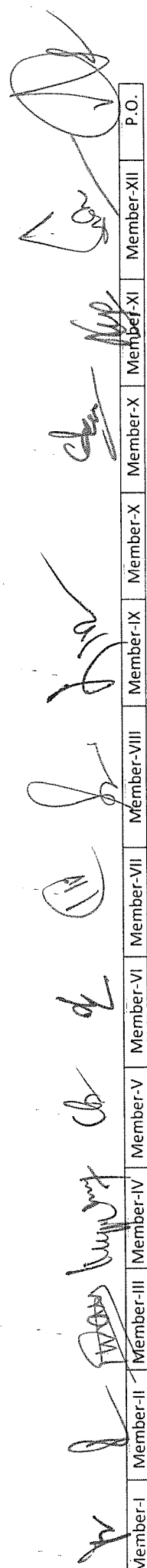
Appendix-1I (i)

SL/NO	NAME OF THE EQUIPMENT	IS IT AVAILABLE IN PET (AS PER 100 BEDDED). IF YES THEN MENTIONED IN SL.NO. OF PET	QRS AVAILABLE OR NOT
01.	DENTAL CHAIR MOUNTED WITH DENTAL UNIT, X-RAY UNIT, LED LIGHT, ULTRASONIC SCALER WITH 3 TIPS, MICROMOTOR, AIROTOR 2 POINTS WITH FIBEROPTIC HAND PIECE, THREE WAY SYRINGE WITH RVG AND RELATED SOFTWARE AND COMPUTER ETC.	1080	YES

Member-I *[Signature]* Member-II *[Signature]* Member-III *[Signature]* Member-IV *[Signature]* Member-V *[Signature]* Member-VI *[Signature]* Member-VII *[Signature]* Member-VIII *[Signature]* Member-IX *[Signature]* Member-X *[Signature]* Member-XI *[Signature]* Member-XII *[Signature]* P.O. *[Signature]*














**Appendix-11 (iii)**

SL. NO	OLD QRS	PROPOSED QRS	JUSTIFICATION
		<p>3.12. It should have two erasable programmable and return to Zero position</p> <p>3.13. It should have LED based X-ray viewer</p> <p>3.14. It should be provided with rotatable right arm</p> <p>3.15. It should have multifunctional foot control base (fixed or mobile)</p> <p>3.16. It should be provided with one doctor's stool and one assistant's stool with adjustable backrest tilt including an adjustable ring for foot rest.</p> <p>3.17. Oil Free Air Compressor, 1 to 1.5 HP with silicon filter and dryer (Medical Grade)</p> <p>3.18. Should have digital intra oral camera with monitor.</p> <p>3.19. <b>Dental X-RAY INTRAORAL MACHINE</b></p> <ul style="list-style-type: none"> <li>i. Operation should be conventional as well as automatic.</li> <li>ii. Completely microcontroller based digital timer assuring the accuracy of the exposure time selected.</li> <li>iii. Ease of operation as all the functions can be selected from the remote control as well as Timer.</li> <li>iv. Feather touch keypad and length of exposure cable should be 5 to 6 meters.</li> <li>v. Digital Timer with the accuracy of 0.01 Sec (0.01 Sec. to 4.00 Sec).</li> <li>vi. Patient Selection Switches (Thin, Normal &amp; Obese).</li> <li>vii. Film Speed Selection Switches (3 speeds).</li> <li>viii. RVG mode for RVG Sensor.</li> <li>ix. High Voltage Protection for the X-Ray Tube.</li> <li>x. An excellent output of 65kv-70kv, 7mAs-10mAs.</li> <li>xi. Audible &amp; Visual indication of "X-Ray On" (Radiation indications).</li> <li>xii. Should provide compatible Voltage Stabilizer (built in /external).</li> </ul>	
















**Appendix-1I (iv)**

SL. NO	OLD QRS	PROPOSED QRS	JUSTIFICATION
		<p>xiii. Collimating device should be 20cm in length and a pointed cone should also be provided. It should have built in aluminium filter of 2mm thickness.</p> <p>xiv. Excellent, smooth mechanical manoeuvrability, long reach scissor arm.</p> <p>xv. Should provide a pedestal stand with freely movable round wheels with locking devices to prevent unusual and excessive movement/wall mount /portable.</p> <p>xvi. A lead partition or lead apron (1 each) with all attachments and thyroid collars should be provided with a standard and properly tested for operator's safety.</p> <p>xvii. Detailed Operational manual (Hard &amp; Soft copy both) in English should be provided.</p> <p>xviii. The system should comply with national quality certification /international standards for radiation safety including CE/USFDA/BARC/AERB certified.</p> <p>xix. Operating condition : Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances.</p> <p>xx. Storage condition:- Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.</p> <p><b>3.20 RVG.</b></p> <p>i. CCD / Super CMOS technology.</p> <p>ii. Sensor size : Size No. 1 (Universal) and size 2 which should be convenient and comfortable for Adult as well as Pediatric. Final decision will be taken at the time of actual demonstration.</p>	

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 Member-XII  
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**Appendix-1I (v)**

SL. NO	OLD QRS	PROPOSED QRS	JUSTIFICATION
		<ul style="list-style-type: none"> <li>iii. No. of Pixels minimum 16-24 lb/mm [true resolution]</li> <li>iv. Pixel size in the range of 18.5 X 18. 5 micron. To 20X20 micron.</li> <li>v. Exposure life should be minimum 4 lakhs.</li> <li>vi. Should provide TWAIN compatible software such as IOC, Scanner, and Digital camera.</li> <li>viii. Should be DICOM compatible.</li> <li>ix. Sensor cable length should be 3 meters and reinforced for durability &amp; reliability. [Fiber optic &amp; scintillator tech.]</li> <li>x. Dental X-ray unit with RVG (with software) should be supplied with adequate and compatible computer system with latest operating system i.e. i.e. desktop/laptop of latest version (minimum i5 processor with 500 GB or more disk drive and RAM approx 4 GB) and suitable colour printer.</li> <li>xi. Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.</li> <li>xii. Operating condition : Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances.</li> <li>xiii. Storage condition:- Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.</li> </ul> <p><b>4 System Configuration Accessories, spares and consumables</b></p> <p>4.1 System as specified</p> <p>4.2 All consumables required for installation and standardization of system to be given free of cost.</p>	

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  Member-IX | 
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  Member-XI | 
  Member-XII | 
  P.O.


Appendix-11 (vi)


SL. NO	OLD QRS	PROPOSED QRS	JUSTIFICATION
		<p>4.3 All fixtures and furniture for 10x12 feet surgeries. Fixtures should include modular work station with acid and fire resistant table top, high quality wash basin, modular drawer system of approximate size of 6 feetx2.5 feetx3 feet and one instrument trolley.</p> <p>4.4 All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.</p> <p><b>5 Environmental factors</b></p> <p>5.1 The unit shall be capable of operating continuously in ambient temperature of 10-40deg</p> <p>5.2 Complete installation of the system, including water input and drainage system has to be installed</p> <p><b>6 Power Supply</b></p> <p>6.1 Power input to be 220-240VAC, 50Hz</p> <p>6.2 Five KV Servo Voltage stabilizer of appropriate ratings meeting ISI Specifications. (Input 160-260 V and output 220-240 V and 50 Hz)</p> <p><b>7 Standards, Safety and Training</b></p> <p>7.1 Should be USFDA/ European CE approved product</p> <p>7.2 Manufacturer/Supplier should have ISO certification for quality standards.</p> <p>7.3 Electrical safety conforms to standards for electrical safety IEC- 60601 / IS-13450.</p>	


Member-I	Member-II	Member-III	Member-IV	Member-V	Member-VI	Member-VII	Member-VIII	Member-IX	Member-X	Member-XI	Member-XII	P.O.
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**Appendix-11 (vii)**

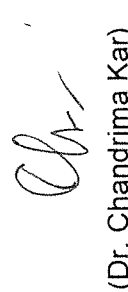
SL. NO	OLD QRS	PROPOSED QRS	JUSTIFICATION
		<p><b>8 Documentation</b></p> <p>8.1 User/Technical/Maintenance manuals to be supplied in English.</p> <p>8.2 Certificate of calibration and inspection.</p> <p>8.3 List of important spare parts, handpieces, and accessories with their part number and costing</p> <p>8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.</p>	


  
 (Dr. J. Chapatadhayay)  
 BSF  
 Member-I  
 RH, ITBP, Gr. Noida  
 Member-I


  
 (Dr. Rohit Shyam Bobil)  
 CMO(SG) (ENT)  
 Member-I

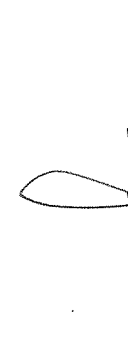
  
 (Dr. Saquib Khan)  
 CMO  
 (OG)  
 (Radiology) CRPF,  
 Member-III


  
 (Dr. R. Kuppum Samy)  
 CMO(SG)  
 (Paediatrics) CRPF  
 Member-IV


  
 (Dr. Chandrima Kar)  
 Comdt /Spl. Gr.I &  
 (Obs Gyn), CRPF  
 Member-V


  
 (Dr. Anurag Jain)  
 Contractual, Spl  
 (Orthopaedics),  
 CRPF Member-VI


  
 (Dr. Rakesh Tiwari)  
 CMO (SG)  
 (Anaesthesia),  
 ITBP Member-VII

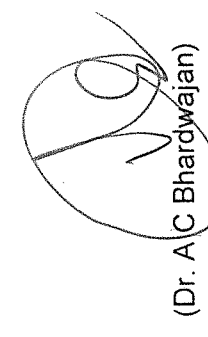
  
 (Dr. Sarfali Gupta)  
 Comdt /Spl. Gr.I  
 (Ophthalmology), ITBP,  
 Member-VIII

  
 (Dr. Rajkamal Nimesh)  
 Comdt /Spl. Gr-I  
 (Surgery), ITBP,  
 Member-IX

  
 (Dr. Ph Gaitri Devi)  
 Comdt/CDS (SG),  
 (Dental), SSB  
 Member-X

  
 (Dr. Neeraj Kumar)  
 CMO, (Medicine),  
 ITBP  
 Member-XI

  
 (Dr. Soumyesh Ghosh)  
 Comdt./Spl. Gr.I  
 (Pathology), ITBP  
 Member-XII

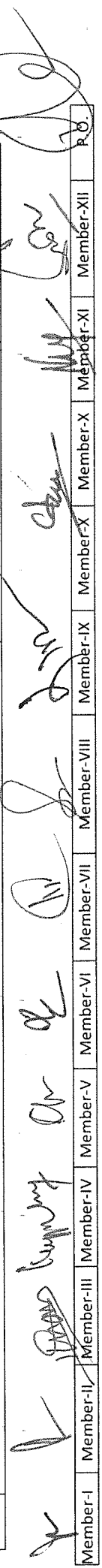
  
 (Dr. A C Bhardwajan)

IG (Med.), RH, ITBP, Gr. Noida  
 Presiding Officer

Appendix-11 (viii)

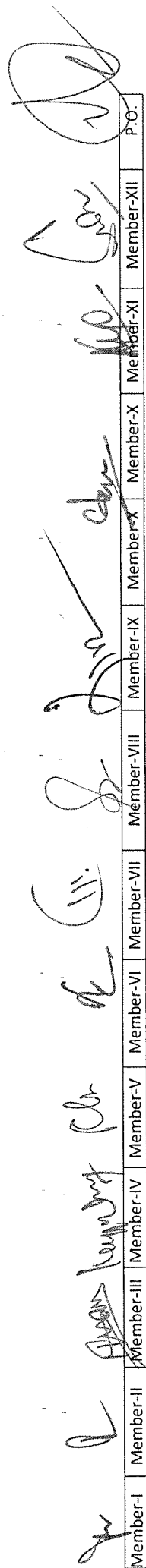
**1. QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF "DENTAL CHAIR MOUNTED WITH DENTAL UNIT, X-RAY UNIT, LED LIGHT, ULTRASONIC SCALER WITH 3 TIPS, MICROMOTOR, AIROTOR 2 POINTS WITH FIBEROPTIC HAND PIECE, THREE WAY SYRINGE WITH RVG AND RELATED SOFTWARE AND COMPUTER ETC."**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	<p><b>1. DESCRIPTION OF FUNCTION</b></p> <p>1.1 Dental Chair Medium is the Dental Chair required for dental and surgical procedures.</p> <p><b>2 Operational Requirements</b></p> <p>2.1 Physiological Dental Chair operated by electricity</p> <p><b>3 Technical Specifications</b></p> <p>3.1. Dental unit should have latest overhead delivery system</p> <p>3.2. It should have two 3 way syringes (tip autoclavable, with 4 spare tips) one on unit side and other on the assistant side.</p> <p>3.3. It should have one high speed Air Rotor terminal with water control on coupling supplied with original CE 380000 rpm handpiece.</p> <p>3.4. It should have one high speed fiber-optic air-rotor terminal with handpiece</p> <p>3.5. One brushless micromotor (40000 rpm) terminal having straight and contra angle handpieces</p> <p>3.6. It should have LED light cure unit on unit sides (Min. Intensity 800 mW/cm2 and wave length range - 370 - 500 nm output)</p> <p>3.7. It should have one in-built Piezon Ultrasonic Scaler (frequency 28-36 KHz) with 3scaler tips and one set of perio-curette tips</p> <p>3.8. All handpieces/terminals should be kept on Autoclavable pads. 6 spare autoclavable pads should be supplied</p> <p>3.9 Removable auxillary tray (stainless steel)</p> <p>3.10. It should have latest LED/halogen Light with two or three intensity and sensor control(min 35,000 LUX)</p> <p>3.11. It should have high and low vacuum motorized with continuous nonstop function suction</p>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	<p>As per specification.</p>



**Appendix-1I (ix)**

SI. No	SPECIFICATIONS	Procedure suggested for board of officers	Result expected/ Desired
	<p>3.12. It should have two erasable programmable and return to Zero position</p> <p>3.13. It should have LED based X-ray viewer</p> <p>3.14. It should be provided with rotatable right arm</p> <p>3.15. It should have multifunctional foot control base (fixed or mobile)</p> <p>3.16. It should be provided with one doctor's stool and one assistant's stool with adjustable backrest tilt including an adjustable ring for foot rest.</p> <p>3.17. Oil Free Air Compressor, 1 to 1.5 HP with silicon filter and dryer (Medical Grade)</p> <p>3.18. Should have digital intra oral camera with monitor.</p> <p>3.19. <b>Dental X-RAY INTRAORAL MACHINE</b></p> <ul style="list-style-type: none"> <li>i. Operation should be conventional as well as automatic.</li> <li>ii. Completely microcontroller based digital timer assuring the accuracy of the exposure time selected.</li> <li>iii. Ease of operation as all the functions can be selected from the remote control as well as Timer.</li> <li>iv. Feather touch keypad and length of exposure cable should be 5 to 6 meters.</li> <li>v. Digital Timer with the accuracy of 0.01 Sec (0.01 Sec. to 4.00 Sec).</li> <li>vi. Patient Selection Switches (Thin, Normal &amp; Obese).</li> <li>vii. Film Speed Selection Switches (3 speeds).</li> <li>viii. RVG mode for RVG Sensor.</li> <li>ix. High Voltage Protection for the X-Ray Tube.</li> <li>x. An excellent output of 65kv-70kv, 7mAs-10mAs.</li> <li>xi. Audible &amp; Visual indication of "X-Ray On" (Radiation indications).</li> <li>xii. Should provide compatible Voltage Stabilizer ( built in /external).</li> </ul>	<p>Board check during demonstration.</p> <p>Board should physically demonstrate.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	<p>As per specification.</p>



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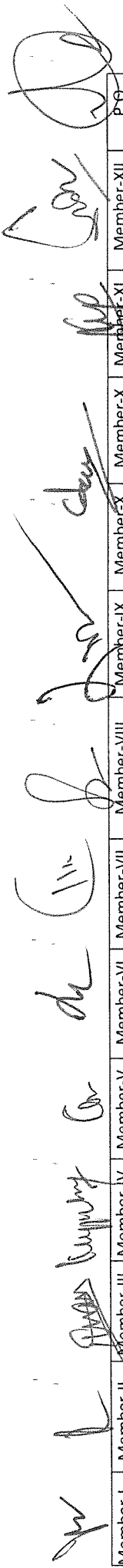


**Appendix-1I (x)**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p>xiii. Collimating device should be 20cm in length and a pointed cone should also be provided. It should have built in aluminium filter of 2mm thickness.</p> <p>xiv. Excellent, smooth mechanical manoeuvrability, long reach scissor arm.</p> <p>xv. Should provide a pedestal stand with freely movable round wheels with locking devices to prevent unusual and excessive movement/wall mount /portable.</p> <p>xvi. 16 A lead partition or lead apron (1 each) with all attachments and thyroid colors should be provided with a standard and properly tested for operator's safety.</p> <p>xvii. Detailed Operational manual (Hard &amp; Soft copy both) in English should be provided.</p> <p>xviii. The system should comply with national quality certification / international standards for radiation safety including CE/USFDA/BARC/AERB certified.</p> <p>xix. Operating condition : Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances.</p> <p>xx. Storage condition:- Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.</p>		

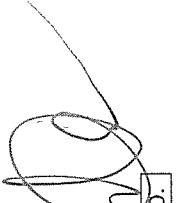
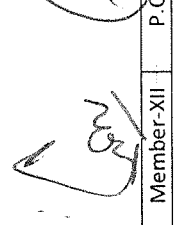
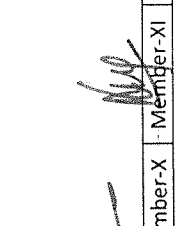
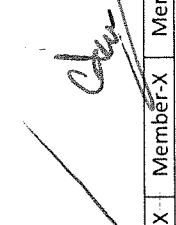
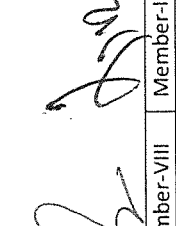
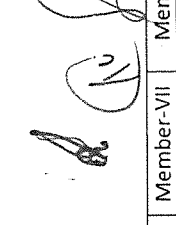
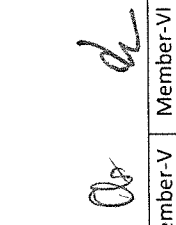
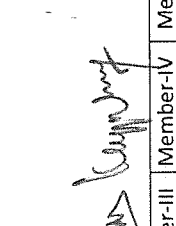
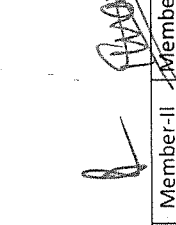
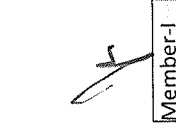
3.20 RVG.

- i. CCD / Super CMOS technology.
- ii. Sensor size : Size No. 1 (Universal) and size 2 which should be convenient and comfortable for Adult as well as Pediatric. Final decision will be taken at the time of actual demonstration.



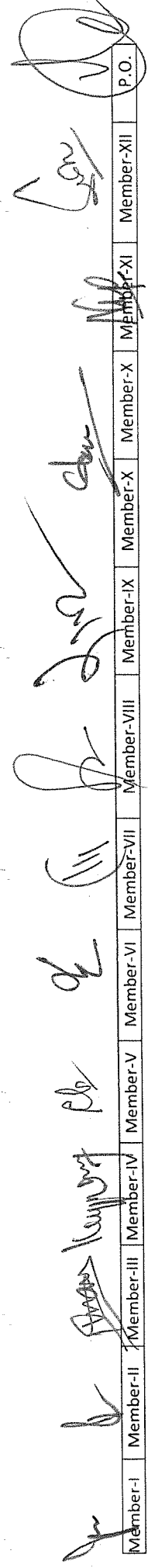
**Appendix-1I (xi)**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p>vii. No. of Pixels minimum 16-24 lb/mm [true resolution]</p> <p>viii. Pixel size in the range of 18.5 X 18. 5 micron. To 20X20 micron.</p> <p>ix. Exposure life should be minimum 4 lakhs.</p> <p>x. Should provide TWAIN compatible software such as IOC, Scanner, and Digital camera.</p> <p>xii. Should be DICOM compatible.</p> <p>xiii. Sensor cable length should be 3 meters and reinforced for durability &amp; reliability. [Fiber optic &amp; scintillator tech.]</p> <p>xiv. Dental X-ray unit with RVG (with software) should be supplied with adequate and compatible computer system with latest operating system i.e. desktop/laptop of latest version (minimum i5 processor with 500 GB or more disk drive and RAM approx 4 GB) and suitable colour printer.</p> <p>xv. Disinfection: Parts of the Device that are designed to come into contact with the patient or the operator should either be capable of easy disinfection or be protected by a single use/disposable cover.</p> <p>xvi. Operating condition : Capable of operating continuously in ambient temperature of 5 to 50 deg C and relative humidity of 15 to 80% in ideal circumstances.</p> <p>xvii. Storage condition:- Capable of being stored continuously in ambient temperature of 0 to 50 deg C and relative humidity of 15 to 90%.</p>		
	<p><b>4 System Configuration Accessories, spares and consumables</b></p> <p>4.1 System as specified</p> <p>4.2 All consumables required for installation and standardization of system to be given free of cost.</p>		

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Appendix-11 (xii)


SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p>4.3 All fixtures and furniture for 10x12 feet surgeries. Fixtures should include modular work station with acid and fire resistant table top, high quality wash basin, modular drawer system of approximate size of 6 feetx2.5 feetx3 feet and one instrument trolley.</p> <p>4.4 All the outlet and inlet for the services to chair should be concealed in a box at foot area or within the unit for infection control purpose.</p> <p><b>5 Environmental factors</b></p> <p>5.1 The unit shall be capable of operating continuously in ambient temperature of 10-40deg</p> <p>5.2 Complete installation of the system including water input and drainage system has to be installed</p> <p><b>6 Power Supply</b></p> <p>6.1 Power input to be 220-240VAC, 50Hz</p> <p>6.2 Five KV Servo Voltage stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)</p> <p><b>7 Standards, Safety and Training</b></p> <p>7.1 Should be USFDA/ European CE approved product</p> <p>7.2 Manufacturer/Supplier should have ISO certification for quality standards.</p> <p>7.3 Electrical safety conforms to standards for electrical safety IEC- 60601 / IS-13450.</p>		





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**Appendix-1I (xiii)**

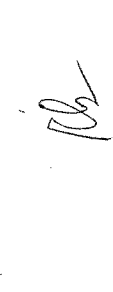
SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p><b>8 Documentation</b></p> <p>8.1 User/Technical/Maintenance manuals to be supplied in English.</p> <p>8.2 Certificate of calibration and inspection.</p> <p>8.3 List of important spare parts, handpieces, and accessories with their part number and costing</p> <p>8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.</p>		


  
 (Dr. J Chatopadhyay)  
 Member-I  
 BSF  
 CMO (SG) (ENT)  
 RH, ITBP, Gr. Noida  
 Member-II


  
 (Dr. Rohit Shyam Bobil)  
 Member-II  
 CMO(SG) (ENT)  
 RH, ITBP, Gr. Noida  
 Member-II

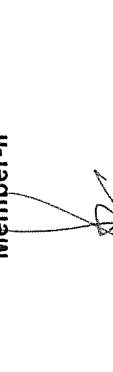
  
 (Dr. Saquib Khan)  
 Member-III  
 CMO (OG)  
 (Radiology) CRPF,  
 Member-III

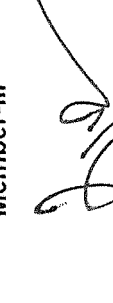
  
 (Dr. R Kuppuy Samy)  
 Member-IV  
 CMO(SG)  
 (Paediatrics) CRPF  
 Member-IV


  
 (Dr. Chandrima Kar)  
 Member-V  
 Comdt /Spl: Gr.I &  
 (Obs Gyn), CRPF  
 Member-V


  
 (Dr. Anurag Jain)  
 Member-VI  
 Contractual, Spl  
 (Orthopaedics),  
 CRPF  
 Member-VI


  
 (Dr. Rakesh Tiwari)  
 Member-VII  
 CMO (SG)  
 (Anaesthesia),  
 ITBP  
 Member-VII


  
 (Dr. Shaifali Gupta)  
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 Member-VIII

  
 (Dr. Rajkamal Nimesh)  
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 Comdt /Spl. Gr-I  
 (Surgery), ITBP,  
 Member-IX

  
 (Dr. Ph. Gaitri Devi)  
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 Comdt./CDS (SG),  
 (Dental), SSB  
 Member-X

  
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 ITBP  
 Member-XI

  
 (Dr. Soumyesh Ghosh)  
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 Comdt./Spl. Gr.I  
 (Pathology), ITBP  
 Member-XII

  
 (Dr. A C Bhardwajan)  
 IG (Med.), RH, ITBP, Gr. Noida  
**Presiding Officer**

Appendix-21 (i)

SL/NO	NAME OF THE EQUIPMENT	IS IT AVAILABLE IN PET (AS PER 100 BEDDED). IF YES THEN MENTIONED IN SL.NO. OF PET	QRs AVAILABLE OR NOT
01.	ORTHO PANTOMAGRAM (OPG)	NO	NO
02.	ENDODONTIC MICROSCOPE	1096	NO
03.	SOFT TISSUE DIODE DENTAL LASER	1098	NO
04.	EXTRA ORAL DENTAL VACCUUM SUCTION	NO	NO
05.	BIOPOLAR AND MONOPOLAR ELECTROCAUTERY EQUIPMENT	NO	NO
06.	DENTAL BLEACHING UNIT	1103	NO
07.	MOBILE DENTAL CABINET	NO	NO

Member-I *[Signature]* Member-II *[Signature]* Member-III *[Signature]* Member-IV *[Signature]* Member-V *[Signature]* Member-VI *[Signature]* Member-VII *[Signature]* Member-VIII *[Signature]* Member-IX *[Signature]* Member-X *[Signature]* Member-XI *[Signature]* Member-XII *[Signature]* P.O. *[Signature]*

Appendix-21 (ii)

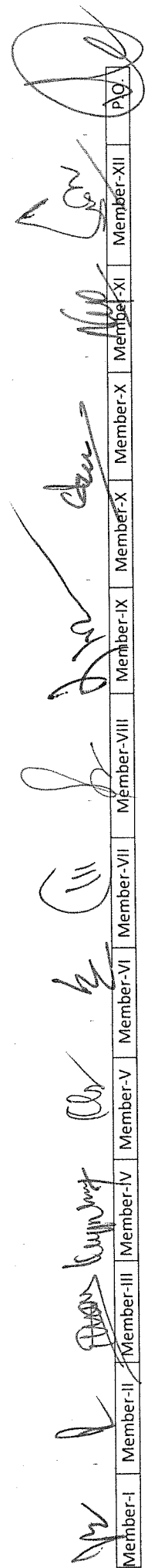
**1. QRs/SPECIFICATIONS AND TRIAL DIRECTIVES OF "ORTHOPANTOMAGRAM (OPG)"**

Sl. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected / Desired
A.	<p><b>X-RAY TUBE :</b></p> <ol style="list-style-type: none"> <li>Generator: High frequency DC generator, operating frequency at least 40kHz</li> <li>Line Voltage: 230V- 240V, 50-60Hz</li> <li>Tube voltage: 57-85KV</li> <li>Tube Current: 03 – 16 mA</li> <li>Exposure compensation: Automatic Exposure Control.</li> <li>Focal spot size: : Between 0.7mm X 0.7 mm and 0.5mm X 0.5 mm, as per IEC standards</li> <li>Total Filtration: Equivalent to 2.5mm Al or more</li> <li>Magnification of exposures: Should have a constant magnification</li> <li>Effective exposure time: Adjustable Timer (Pediatric &amp; Adult) for the available imaging programmes.</li> </ol>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	As per specification.
B.	<p><b>BASIC UNIT</b></p> <ol style="list-style-type: none"> <li>The x ray machine should have AERB approval certification.</li> <li>Should be floor or wall mounted model/portable.</li> <li>Should have fully/semi motorized patient positioning system</li> <li>Should have 3 laser positioning lights – Mid Sagital, Frankfurt and Canine</li> <li>Patient positioning by Bite block, Chin rest, Chin support and motorized/manual temple support.</li> <li>Should have accessibility for wheel chair patients.</li> <li>Should have centralized control system with all functions controlled by colour TFT touch screen or PC, Graphical User Interface (GUI) with digital display of technical factors and selected programmes.</li> </ol>		

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**Appendix-21/(iii)**

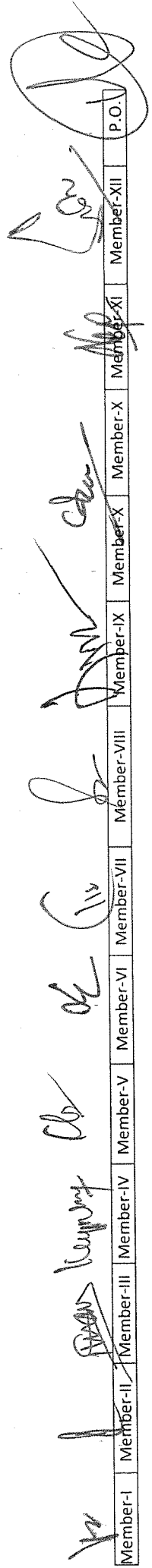
SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p>8. Should have an adjustable form of focal trough depending on jaw shape and size of patient.</p> <p>9. Should have automatic compensation for the cervical vertebrae shadow.</p> <p>10. The imaging geometry should eliminate the redundant shadows and ghost images.</p> <p>11. Should have a test mode which disables X-ray radiation during operation.</p> <p>12. Should have exposure counters separate /or combined for Panoramic, Cephalometry and total no of images</p> <p>13. Should have the following programs:</p> <ul style="list-style-type: none"> <li>a) Standard Panoramic Program.</li> <li>b) Pediatric program (low dose, reduced exposure area for small patient)</li> <li>c) Automatic Double TMJ Program.</li> <li>d) Sinus program</li> <li>e) Lateral and PA Cephalogram.</li> <li>f) Should Support carpus / hand wrist imaging.</li> <li>g) Submentoverte views.</li> </ul> <p>14. Should have motorized up and down movement.</p>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	<p>As per specification.</p>
C.	<p><b>DIGITAL CEPHALOMETRIC SYSTEM :</b></p> <ul style="list-style-type: none"> <li>1. Should have Computerized automatic cephalometric system.</li> <li>2. Should have automatic alignment of radiation source</li> <li>3. Should have functionally designed and easy-to-use head positioner.</li> <li>4. Should have swiveling nasal support.</li> <li>5. Should have magnification scale that appear on the image</li> <li>6. Automatic soft-tissue filter based on the position of the nasion support.</li> </ul>		



Member-I | Member-II | Member-III | Member-IV | Member-V | Member-VI | Member-VII | Member-VIII | Member-IX | Member-X | Member-XI | Member-XII | P.O.

Appendix-2I (iv)

Sl. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
D.	<p><b>DIGITAL SENSOR SYSTEM :</b></p> <ol style="list-style-type: none"> <li>Should have a high resolution CCD /CMOS flat panel sensor for panoramic and cephalometry. It should be possible to take both panoramic and cephalometric image by using the sensor provided. The cost of one additional sensor shall be quoted separately in the BOQ and the cost offered will not be taken for evaluation.</li> <li>CCD pixel size: between 35m and 150 m.</li> <li>CCD active surface: to be specified.</li> <li>Image field: to be specified.</li> <li>Pixel matrix: to be specified.</li> <li>Soft tissue filter should be software operated.</li> </ol>		
E.	<p><b>PC CONFIGURATION REQUIREMENTS :</b></p> <p><b>Latest branded computer with following specifications :</b></p> <ol style="list-style-type: none"> <li>Processor –core i5 4th generation or better or equivalent</li> <li>8 GB RAM and 1 TB or more on Hard disk.</li> <li>Should include 21± LCD/TFT monitor with high resolution to ensure image quality (Display /monitor resolution min 1024 x1024 or higher)</li> <li>CD/DVD Burner.</li> <li>Graphics card NVIDIA 2 GB dedicated GPU or equivalent.</li> <li>Accept images from CCD/CMOS sensor without any loss of data.</li> <li>Capable of archiving &amp; printing selected image to a standard DICOM destination in DICOM 3.0 format (or newer versions).</li> <li>Storing images in the local disk for predefined period.</li> <li>Should be with upgradeable imaging software.</li> </ol>		

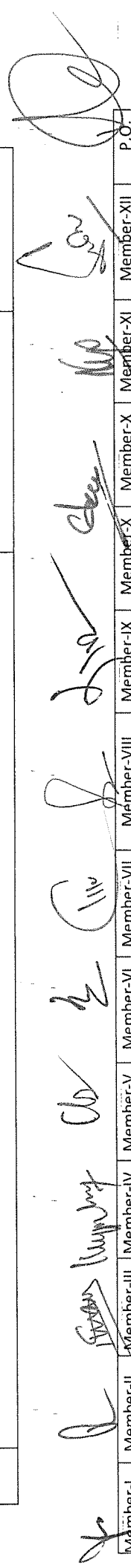


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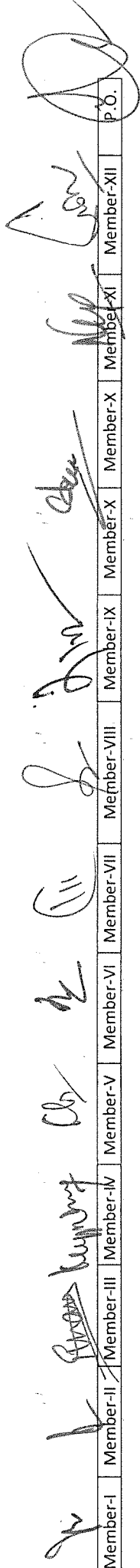
**Appendix-2I (v)**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected / Desired
F.	<p><b>FUNCTIONAL REQUIREMENTS FOR WORK STATION :</b></p> <ol style="list-style-type: none"> <li>Built in routine for using predefined image processing parameters for image quality enhancement.</li> <li>Mechanisms for storing the patient image based on name, date, etc.</li> <li>Capability of storing user defined image processing parameters.</li> <li>Capability of overwriting predefined image parameter with user defined parameters &amp; storing these two images separately.</li> <li>Correcting typographically in patient demographic module, in case the RIS connection was down and manually data entry.</li> <li>Capability of changing W/I, flipping, rotating, zooming, collimating annotating incoming image.</li> <li>Auto routing incoming image to predefined DICOM store (SCP storage) or Print destination (SCP print destination).</li> <li>Mechanism of printing multiple images in one film, with the possibility of slide and True size printing.</li> <li>The work station should let the user select a film size and lay out for hard copies with a WYSIWYG (What you see is what you get), output look up table selection, number of copies selection capabilities.</li> <li>Minimum of 15 pre configured layouts for printing and also possibility of further configuration should be possible.</li> <li>Should be provided with table and chair for workstation.</li> <li>Should provide necessary cabling work for additional workstations.</li> <li>Operating system: Windows 7 or more</li> </ol>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	As per specification.
G.	<p><b>SOFTWARE SPECIFICATIONS</b></p> <p>The system should include the following SW applications as standard:</p> <ol style="list-style-type: none"> <li>Special attention should be placed on pediatric applications.</li> <li>Software for printing on any DICOM printer.</li> </ol>		



**Appendix-2I (vi)**

SI. NO	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	3. Software for storing images on any DICOM3 or newer versions compliance stations. 4. Software for e-filming application: Any Software upgradeability for 5 years to be done by the company		
H.	<b>DRY IMAGER SYSTEM :</b> 1. Print images from work stations. 2. Should be capable of printing images in DICOM format / Direct DICOM Compatibility. 3. Mechanism to print images of OPG, Ceph and multiple image prints of IOPA. The tray should be adjustable to (8" x 10") and (10" x 12"). 4. Resolution should be 300- 508 dpi or better.	Board should check physically during demonstration.  OEM should submit an undertaking and documents in this regard.	As per specification.
I.	<b>ACCESSORIES &amp; CONSUMABLES :</b> 1. Films for Dry Imager system – (8" x 10")- 300 numbers 2. Three folded leaded protective barrier – 1 no. 3. 5 KVA Online UPS with 30 minutes backup for operating all the above mentioned equipments. 4. Lead apron light weight Velcro type 1 no, Thyroid guard -1 No, AERB Approved 5. Air conditioner -2 TR (3 star rating )-1 no.		

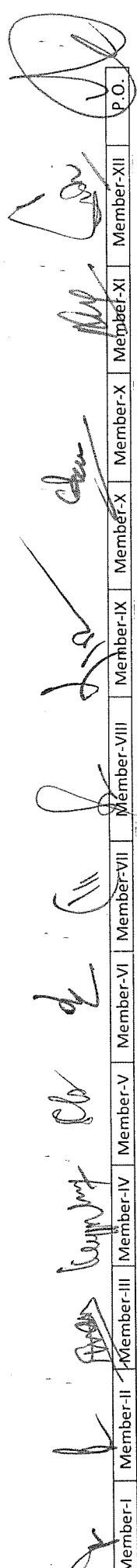


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 P.O.

Appendix-2I (vii)

2. QRs/SPECIFICATIONS AND TRIAL DIRECTIVES OF "ENDODONTIC MICROSCOPE"

Sl. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	<ol style="list-style-type: none"> <li>1. Binocular Tube : 0-210° tiltable ergonomic head</li> <li>2. Achromatic Magnichanger – 3-8 steps.</li> <li>3. Eyepiece : WF 10X/18mm with retractable eye guards, diopter adjustment ± 5mm with diopter lock; optional: WF 12.5X/18mm</li> <li>4. Objective : f-250 mm with fine focus (standard); Options: focal length adjustment f-300-400 mm, f-200-400 mm; f-300 mm or f-400 mm with fine focus; f-200 mm fixed objective; objective lens protector.</li> <li>5. Light Source : 27- 50 W LED; 100,000+ Lux</li> <li>6. Built-in-Filters : Green &amp; Yellow</li> <li>7. Vertical Movement of arm : ± 250 mm, power saving feature with light cut-off in park position</li> <li>8. Microscope carriers : 120° - 310° carrier.</li> <li>9. Mounting Options : Floor stand, wall mount and ceiling mount/table top mount.</li> <li>10. Stand : H-base on 4 locking castor wheels</li> <li>11. <b>General information:</b> <ul style="list-style-type: none"> <li>• Electrical power: AC 220 v, 240 v, 50/60 hz or 110 v on request</li> <li>• Optional accessories:</li> <li>• Beam splitter with 'c' mount CCD digital camera</li> <li>• Monocular assistoscope</li> <li>• Objective lens 300 mm &amp; amp; 400 mm</li> </ul> </li> <li>12. Motorized fine focusing with foot control</li> </ol>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	As per specification.

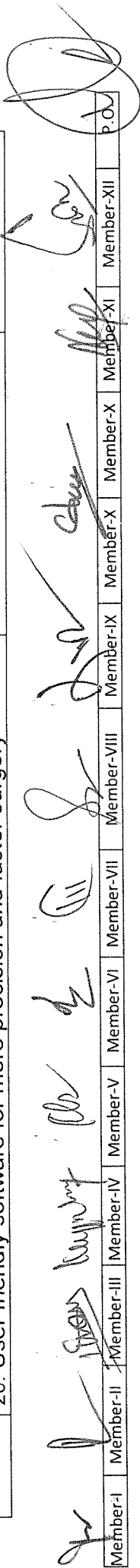


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Appendix-21 (viii)

3. QRs/SPECIFICATIONS AND TRIAL DIRECTIVES OF "SOFT TISSUE DIODE DENTAL LASER"

SI. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	<p><b>SOFT TISSUE DIODE LASER 3 WATTS</b></p> <ol style="list-style-type: none"> <li>1. Should have 15-21 preset programs &amp; 4 customised programs, 4 hrs battery backup, large LCD screen, cordless foot control, built in help tutorials and other specialized features.</li> <li>2. Laser unit with variable power output upto a maximum 3 watt(1 no),</li> <li>3. Laser goggle(2 no),</li> <li>4. <b>Eye protector</b>(1 no),</li> <li>5. <b>multi tip permanent fibre</b> (1 no),</li> <li>6. <b>Tips</b>(5 no),</li> <li>7. User manuals(1 no),set up DVD(1 no),</li> <li>8. Carrying case(1 no).</li> <li>9. <b>Mode: Continuous or Pulse Mode</b></li> <li>10. Hertz Rate in Pulsed Mode: 1-5000Hz</li> <li>11. Pulse Interval: 0.1ms - 9.9s</li> <li>12. Pulse Duration: 0.1ms - 9.9s</li> <li>13. Should achieve multiple levels of aiming beam intensity</li> <li>14. Duty Cycle: Adjustable</li> <li>15. Hand piece autoclavable</li> <li>16. High Light Emitting</li> <li>17. Auto Cooling</li> <li>18. Ergonomic Design with Digital Technology</li> <li>19. With Touch Screen Monitor 15-21 preset treatment programs with foot pedal control</li> <li>20. User friendly software for more precision and faster surgery</li> </ol>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	<p>As per specification.</p>



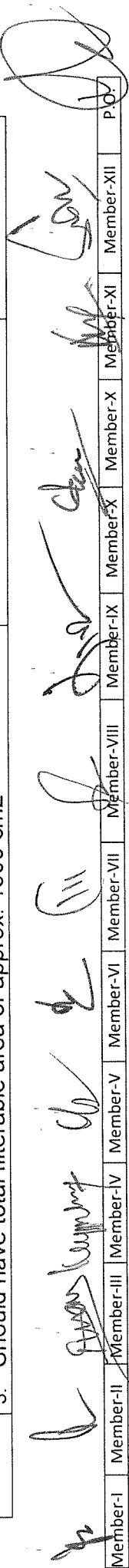
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**Appendix-2I (ix)**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
B.	<b>SOFT TISSUE DIODE LASER 10WATTS</b> 1. Diode Soft tissue laser(10 watts) 2. Features: 15-21 preset programs, 4± customised programs good battery backup, 3. Large LCD screen, cordless foot control, built in help tutorials and other specialized features with 3 yrs warranty. 4. Laser unit 10 watt(1 no), 5. Laser goggle(3 no), 6. Eye protector(1 no), 7. Multi tip permanent fibre in spool form (1 no), 8. Bleaching hand piece(1 no), 9. User manuals(1 no),set up DVD(1 no), 10. Carrying case (1 no)	Board should check physically during demonstration.  OEM should submit an undertaking and documents in this regard.	As per specification.

**4. QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF "EXTRA ORAL DENTAL SUCTION SYSTEM"**

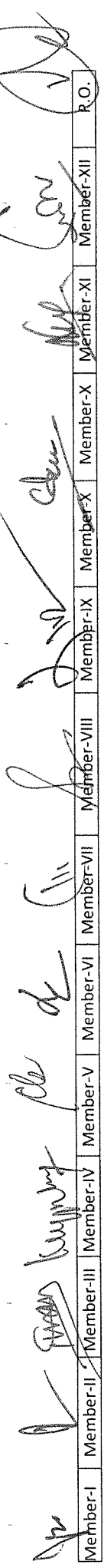













SI. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	Purpose: Extra oral suction System useful for removal of aerosols produced while using dental devices like ultrasonic scalers, Airrotor hand pieces etc. 1. The extra oral suction should have maximum Suction Volume (Amount of Air taken in per minute) – 3700 ± Liters/minute (with 10 levels of adjustment ) 2. Should have Filter Efficiency- 99.97% 3. Should have total filterable area of approx. 1300 cm2		



Member-I	Member-II	Member-III	Member-IV	Member-V	Member-VI	Member-VII	Member-VIII	Member-IX	Member-X	Member-XI	Member-XII	P.O.
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**Appendix-21 (x)**

SI. No	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<p>4. The device should consist of four parts: Vaccum Station, Directional Duct, Suction Nozzle and Volume Controller.</p> <p>5. Should have 2 Filters of HEPA 13-14 Grade (99.97% at 0.3µ MPPS)</p> <p>6. Device should be mobile with two wheels at the base</p> <p>7. Should have flexible duct having an arm length of approx. 1.5 mm (4.92 ft)</p> <p>8. Should be supplied with 2± suction cups for each unit</p> <p>9. Extra Oral Suction device should employ 3 levels of filtration (with a total of 7 filters) followed by UV C radiation</p> <p>10. Should have 3 levels of filtration</p> <p>a. Level 1- High fiber cotton filter</p> <p>b. Level 2- HEPA 13-14 filter</p> <p>c. Level 3- Compound Filter</p> <p>HEPA Filter</p> <p>High Fiber Cotton Filter</p> <p>Activated Carbon Filter</p> <p>Cermasite + KMnO4 Filter</p> <p>11. Extra Oral Suction should come with 2 year warranty.</p> <p>12. Supplier should provide following consumable with the device</p> <p>a. Level 1 filter : 40</p> <p>b. Level 2 filter : 4</p> <p>c. Level 3 filter: 2</p>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	<p>As per specification.</p>
B.	<p><b>Technical Specifications</b></p> <p><b>Motor</b></p> <ul style="list-style-type: none"> <li>-Static Pressure 3000 pa</li> <li>-Brushless DC Motor</li> <li>- Voltage AC Power 220V/50Hz 250W</li> <li>- Dimensions Length Width Height</li> <li>- Range between 400-410 mm</li> </ul>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard</p>	<p>As per specification.</p>

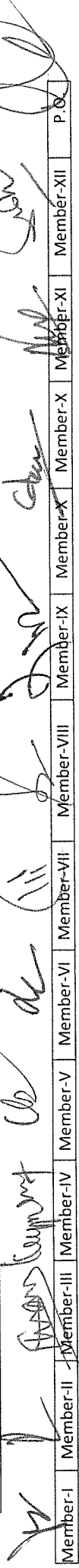

  
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**Appendix-2I (xi)**

SI. NO	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected /Desired
	<ul style="list-style-type: none"> <li>- Range between 228-238mm</li> <li>- Range between 460-470 mm</li> <li>- UV Light(germicidal) Wavelength Intensity - 265 ~ 285 nm 2260 μW/cm2</li> <li>- Noise level ≤62db</li> </ul>		

**5. QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF "BIPOLAR AND MONOPOLAR ELECTROCAUTERY EQUIPMENT"**

SI. No	SPECIFICATIONS	Procedure suggested for board of officers	Result expected/Desired
A.	<p><b>Monopolar Electro surgery unit</b> : 110V, 220V with handpiece unit having Operating modes for cutting, Coagulating &amp; other uses                      8 or more Power level settings                      Maximum power output: 45W (@ 400 ohm load)                      Power supply: 110V± 5% ~50/60Hz 92VA or 220V± 5%~50/60Hz 92VA                      Work frequency: 1.5~1.7MHz± 5%                      Dimension (cm): 23(L) X 22.5(W) X 8.5(H)                      Hand piece cable length: 180 ± cm                      Indifference plate cable length: 180± cm                      Hand piece, Electrode tip, Foot switch, AC Adapter                      Optional Accessories: Bipolar converter.                      ISO and CE Certified specification to be provided by bidder</p> <p><b>Bipolar electrosurgery unit</b> having operating modes for cutting, coagulating and other uses                      8 or more power level settings                      Specifications:                      Electrode tip                      Foot switch                      AC Adapter                      other specification to be provided by bidder</p>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	As per specification.

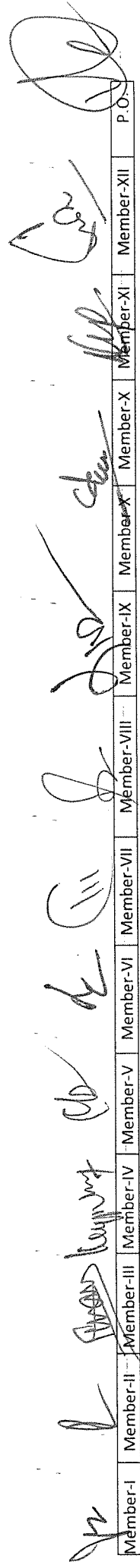


**6. QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF "DENTAL BLEACHING UNIT"**

Sl. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	<p><b>Specifications:</b></p> <ul style="list-style-type: none"> <li>- Wavelength range: 460nm~465nm (blue light) &amp; 620nm~625nm (red light)</li> <li>- Voltage: 100-240 Volts AC, 50-60Hz</li> <li>- Lighting resources: 1~3W/ (blue light); 1~3W/ (red light)/5-8 high power LED light.</li> </ul> <p><b>Features:</b></p> <ul style="list-style-type: none"> <li>- The angle can be adjusted freely and it is more convenient to use.</li> <li>- A versatile, high-sensitivity touch electronic wide screen display for easy operation.</li> <li>- Three or more light source output options: blue, red, blue + red.</li> <li>- Three power output options, the user can choose different power according to the patient's situation.</li> <li>- The user can select the required treatment time according to the needs, the time adjustment range: 1~30 minutes.</li> <li>- With working time timing function.</li> </ul>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an undertaking and documents in this regard.</p>	As per specification.

**7. QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF "MOBILE DENTAL CABINET"**






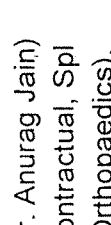
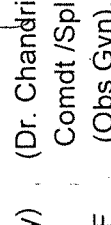
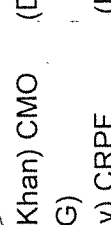
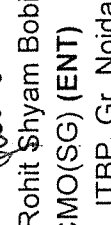
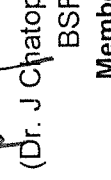
Sl. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
A.	<ol style="list-style-type: none"> <li>1. Overall depth range (mm) :400 mm (+/- 2.5%)</li> <li>2. Overall Width range (mm) :425 mm(+/-2.5%)</li> <li>3. Overall Height range (mm): 820 mm (+/- 2.5%)</li> <li>4. Painting Stove enamel</li> </ol>		

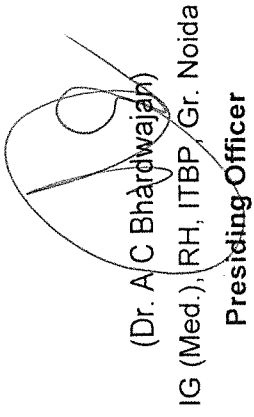




**Appendix-2I (xiii)**

SI. No.	SPECIFICATIONS	Procedure suggested for trial for board of officers	Result expected/ Desired
5.	Type of slide of drawer Fitted With Telescopic Channel.		As per specification.
6.	Material : Wood/metal/alloy with finish powder coated.	OEM should submit an undertaking and documents in this regard.	

- |   |  |   |   |   |  |   |  |   |  |   |   |
|---|--|---|---|---|--|---|--|---|--|---|---|
|  | (Dr. J. Chatopadhyay)<br>BSF,<br>Member-I                            |  | (Dr. Rohit Shyam Bobil)<br>CMO(SG) (ENT)<br>RH, ITBP, Gr. Noida<br>Member-II      |  | (Dr. Saquib Khan) CMO<br>(OG)<br>(Radiology) CRPF,<br>Member-III           |  | (Dr. R. Kuppu Samy)<br>CMO(SG)<br>(Paediatrics) CRPF<br>Member-IV      |  | (Dr. Chandrima Kar)<br>Comdt /Spl. Gr.I &<br>(Obs Gyn), CRPF<br>Member-V |  | (Dr. Anurag Jain)<br>Contractual, Spl<br>(Orthopaedics),<br>CRPF Member-VI  |
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