














ENI

Appendix-'1A(i)'

QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF MEDICAL EQUIPMENT OF ENT DEPARTMENT :-

S.N	NAME OF THE EQUIPMENT	IS IT AVAILABLE IN PET (AS PER 100 BEDDED). IF YES THEN MENTIONED SL.NO. OF PET	QRs AVAILABLE OR NOT	Remarks
1.	Computerized Audiometer with Data Processor	Yes (1397- Audiometer Computerized for ENT Surgeon)	YES	

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-2A (xi)**

Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
5	Sinus Burrs 4mm with 15 degrees to be provided -5 units		
6	The System should be US-FDA/ CE/ BIS Standards		



(Dr. J. Chhatopadhyay)  
BSF  
Member-I



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



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



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



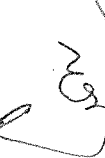
(Dr. Rajkamal Nimesh)  
Comdt / Spl. Gr-I  
(Surgery), ITBP,  
Member-IX



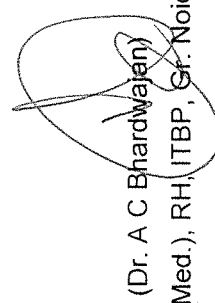
(Dr. Gaitri Devi)  
CDS (SG), (Dental),  
SSB  
Member-X



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



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

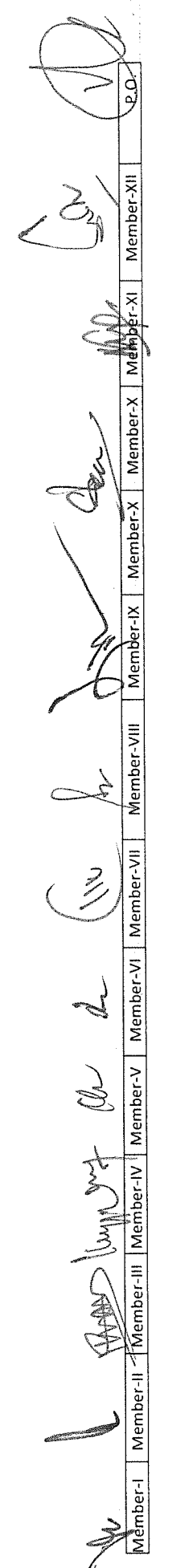


(Dr. A C Bhardwaj)  
IG (Med.), RH, ITBP, Gr. Noida  
Presiding Officer

Appendix-1 A(ii)

1. COMPARATIVE STATEMENT OF "COMPUTERIZED AUDIOMETER WITH DATA PROCESSOR"







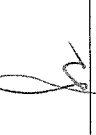


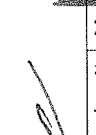

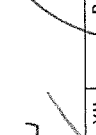

Sl. No.	OLD QRS	PROPOSED/NEW QRS	JUSTIFICATION
1	No. P-24011/EC-VII/1/TD-QRS/MoD-II/2015/MHA/PROV-1 dtd 20/10/2016	<p><b>Special Key Feature:</b></p> <ul style="list-style-type: none"> <li>• Full PC-integration (truehybrid)</li> <li>• High performance andspeed</li> <li>• Extensive diagnostic testbattery</li> <li>• Large 5,7"adjustable high resolution graphical color display</li> <li>• Internal storage for 500 patients/50,000 testsessions</li> <li>• Integrated pre-recordedspeech</li> <li>• Direct print options</li> <li>• Compact and portabledesign</li> </ul> <p><b>INPUT</b></p> <ul style="list-style-type: none"> <li>• Tone, Warble Tone, NB,CD1,CD2,Mic1, Mic2, Wavefiles</li> </ul> <p><b>MASKING STIMULUS:</b></p> <ul style="list-style-type: none"> <li>• Automatic selection for narrow band noise (or white noise) for tone presentation and speech noise for speechpresentation.</li> </ul> <p><b>OUTPUTS:</b></p> <ul style="list-style-type: none"> <li>• AC left +Right, BC Left +Right, Insert Phone Left + Right, Insert Masking, FF1 andFF2</li> </ul> <p><b>TRANSDUCERS:</b></p> <ul style="list-style-type: none"> <li>• TD39/DDD45 Audiometric headset, B71 Boneconductor</li> </ul>	<p>Advance in technology</p> <p>To facilitate maximum manufacturer to participate in Bid process</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-1A (iii)**

SI. No.	OLD QRS	PROPOSED	JUSTIFICATION
		<p><b>TONE PRESENTATION :</b></p> <ul style="list-style-type: none"> <li>• Manual or Reverse. Single or multiple pulses</li> </ul> <p><b>POWER SUPPLY:</b> Built-in power supply</p> <p><b>INTENSITY:</b> AC: - 10 to 120 db HL in 1, 2 or 5 db steps. BC: 10 to 80 db in 1, 2 or 5 db steps</p> <p><b>FREQUENCY RANGE:</b></p> <ul style="list-style-type: none"> <li>• 125Hz to 20 KHZ for airconduction</li> <li>• 125 Hz to 8 KHZ for Boneconduction</li> </ul> <p><b>PATIENT COMMUNICATION:</b></p> <ul style="list-style-type: none"> <li>• Talk forward/ TalkBack</li> </ul> <p><b>MONITOR:</b></p> <ul style="list-style-type: none"> <li>• Output through built-in speaker or through external earphone or speaker</li> </ul> <p><b>INTERNAL STORAGE:</b></p> <ul style="list-style-type: none"> <li>• 500 patients- or 50,000 test sessions</li> <li>•</li> </ul>	

**Appendix-1A (iv)**

SI. No.	OLD QRS	PROPOSED	JUSTIFICATION
		<p><b>SPECIAL TEST:</b> Auto threshold, ABLB, Stenger, Stenger Speech, TEN Test, Speech Audiometer, SISI Test PC and printer</p> <p><b>INCLUDED PARTS:</b></p> <ul style="list-style-type: none"> <li>• Monitor Headset</li> <li>• B71 Boneconductor</li> <li>• APS3 patient response button</li> <li>• Microphone</li> <li>• PowerCable</li> <li>• Operation ManualCD</li> <li>• Multilingual CE instructions foruse</li> <li>• Inbuiltprinter</li> </ul> <p><b>SAFETY STANDARD:</b> IEC 60601-1, ES60601-1, CAN/CSA-C22.2No.60601.1</p> <p><b>AUDIOMETER STANDARDS:</b> Audiometer : IEC 60645-1, ANSI S3.6, type 2. Speech : IEC 60645-2/ANSI S3.6, type B orB-E</p>	

Member-I	Member-II	Member-III	Member-IV	Member-V	Member-VI	Member-VII	Member-VIII	Member-IX	Member-X	Member-X	Member-XI	Member-XII	P.O.
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**Appendix-1A (v)**

SI. No.	OLD QRS	PROPOSED	JUSTIFICATION
		<p><b>CE/FDA approved</b> 2 years warranty and rates for 5 years CMC post warranty s</p>	



(Dr. J. Chatopadhyay)  
BSF  
Member-I



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

(1/10)

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



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



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



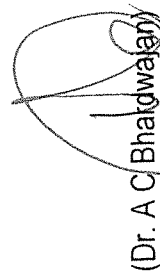
(Dr. Gairi Devi)  
CDS (SG), (Dental),  
SSB  
Member-X



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



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

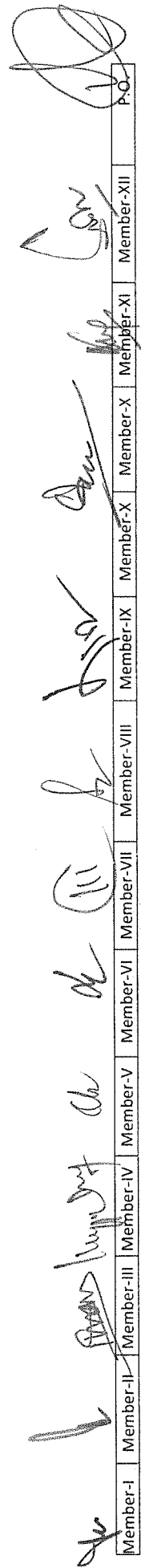


(Dr. A C Bhatnagar)  
IG (Med.), RH, ITBP, Gr. Noida  
Presiding Officer

Appendix-1A (vi)

**1. QRs & TDs of COMPUTERIZED AUDIOMETER WITH P.C. & PRINTER**














Specifications	Procedure suggested for trial by board of officers	Results expected/Desired
<p><b>Special Key Feature:</b></p> <ul style="list-style-type: none"> <li>• Full PC-integration (truehybrid)</li> <li>• High performance and speed</li> <li>• Extensive diagnostic test battery</li> <li>• Large 5.7" adjustable high resolution graphical color display</li> <li>• Internal storage for 500 patients/50,000 test sessions</li> <li>• Integrated pre-recorded speech</li> <li>• Direct print options</li> <li>• Compact and portable design</li> </ul>	<p>Board should check physically during demonstration.</p> <p>OEM should submit an and undertaking documents in this regard.</p>	<p>As per specification.</p>
<p><b>INPUT</b></p> <ul style="list-style-type: none"> <li>• Tone, Warble Tone, NB, CD1, CD2, Mic1, Mic2, Wavefiles</li> </ul>		
<p><b>MASKING STIMULUS:</b></p> <ul style="list-style-type: none"> <li>• Automatic selection for narrow band noise (or white noise) for tone presentation and speech noise for speech presentation.</li> </ul>		
<p><b>OUTPUTS:</b></p> <ul style="list-style-type: none"> <li>• AC left +Right, BC Left +Right, Insert Phone Left + Right, Insert Masking, FF1 and FF2</li> </ul>		
<p><b>TRANSDUCERS:</b></p> <ul style="list-style-type: none"> <li>• TD39/DD45 Audiometric headset, B71 Boneconductor</li> </ul>		
<p><b>STONE PRESENTATION :</b></p> <ul style="list-style-type: none"> <li>• Manual or Reverse. Single or multiple pulses</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.
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**Appendix-1A (vii)**











Specifications	Procedure suggested for trial by board of officers	Results expected/Desired
<b>PATIENT SIGNAL:</b> <ul style="list-style-type: none"> <li>• One hand held pushbutton.</li> </ul>	Board should check physically during demonstration.	As per specification.
<b>POWER SUPPLY:</b> <ul style="list-style-type: none"> <li>• Built-in powersupply</li> </ul>	OEM should submit an undertaking and documents in this regard.	
<b>INTENSITY:</b> <ul style="list-style-type: none"> <li>• AC: - 10 to 120 db HL in 1, 2 or 5 db steps. BC: 10 to 80 db in 1, 2 or 5 dbsteps</li> </ul>		
<b>FREQUENCY RANGE:</b> <ul style="list-style-type: none"> <li>• 125Hz to 20 KHZ for airconduction</li> <li>• 125 Hz to 8 KHZ for Boneconduction</li> </ul>		
<b>PATIENT COMMUNICATION:</b> <ul style="list-style-type: none"> <li>• Talk forward/ TalkBack</li> </ul>		
<b>MONITOR:</b> <ul style="list-style-type: none"> <li>• Output through built-in speaker or through external earphone orspeaker</li> </ul>		
<b>INTERNAL STORAGE:</b> <ul style="list-style-type: none"> <li>• 500 patients- or 50,000 testsessions</li> </ul>		
<b>SPECIAL TEST:</b> Auto threshold, ABLB, Stenger, Stenger Speech, TEN Test, Speech Audiometer, SISI Test PC and printer		
<b>INCLUDED PARTS:</b> <ul style="list-style-type: none"> <li>• Monitor Headset</li> <li>• B71 Bone conductor</li> <li>• APS3 patient response button</li> <li>• Microphone</li> <li>• Power Cable</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-1A (vii)

Specifications	Procedure suggested for trial by board of officers	Results expected/ Desired
<ul style="list-style-type: none"> <li>Operation Manual CD</li> <li>Multilingual CE instructions for use</li> <li>Inbuilt printer</li> </ul>	Board should check physically during demonstration.	As per specification.
<p><b>SAFETY STANDARD:</b></p> <ul style="list-style-type: none"> <li>IEC 60601-1, ES60601-1, CAN/CSA-C22.2No.60601.1</li> </ul> <p><b>AUDIOMETER STANDARDS:</b></p> <ul style="list-style-type: none"> <li>Audiometer : IEC 60645-1, ANSI S3.6, type 2. Speech : IEC 60645-2/ANSI S3.6, type B or B-E</li> </ul> <p><b>CE/FDA approved</b> 2 years warranty and rates for 5 years CMC post warranty s</p>	OEM should submit an undertaking and documents in this regard.	














				
(Dr. J. Chatopadhyay) BSF Member-I	(Dr. Rohit Shyam Bobil) CMO(SG) (ENT) RH, ITBP, Gr. Noida Member-I	(Dr. Saquib Khan) CMO (OG) (Radiology) CRPF, Member-III	(Dr. R. Kuppul Samy) CMO(SG) (Paediatrics) CRPF Member-IV	(Dr. Anurag Jain) Contractual, Spl (Orthopaedics), CRPF Member-VI
				
(Dr. Rakesh Tiwari) CMO (SG) (Anaesthesia), ITBP Member-VII	(Dr. Shaifali Gupta) Comdt /Spl. Gr.I (Ophthalmology), ITBP, Member-VIII	(Dr. Rajkamal Nimesh) Comdt /Spl. Gr-I (Surgery), ITBP, Member-IX	(Dr. Gaitri Devi) CDS (SG), (Dental), SSB Member-X	(Dr. Soumyesh Ghosh) Comdt./Spl. Gr.I (Pathology), ITBP Member-XII

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

Appendix-'2A(i)'






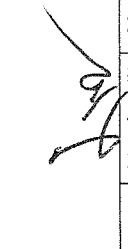
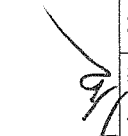
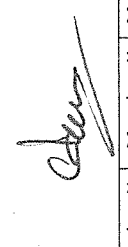
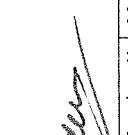




QRS/SPECIFICATIONS AND TRIAL DIRECTIVES OF MEDICAL EQUIPMENT OF ENT DEPARTMENT :-

S.N	NAME OF THE EQUIPMENT	IS IT AVAILABLE IN PET (AS PER 100 BEDDED). IF YES THEN MENTIONED SL.NO. OF PET	QRs AVAILABLE OR NOT	Remarks
1	Fibre Optic Laryngoscope with Light Source	Yes (802)	NO	
2	Flexible Fibre Optic Naso- Pharyngo Oesophago scope	Yes (1388-Flexible Naso- Pharyngoscope)	NO	
3	Endodontic ENT Microscope	Yes (162- Operating Microscope(Zeiss))	NO	
4	OTOLOGY MICRODEBRIDER SYSTEM	NO	NO	

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. 

**1. QRs AND TDS OF FIBRE OPTIC LARYNGOSCOPE WITH LIGHT SOURCE**

CRITERIA	SPECIFICATIONS		PROCEDURE SUGGESTED FOR TRIAL FOR BOARD OF OFFICERS	RESULT EXPECTED/ DESIRED
General Specifications	1. Probe :	a) Probe effective length 01 mtr, 2 mtrs or more b) Outer diameter 8 mm or less c) Probe type & flexibility Flexible / Semi-flexible		
	2. Optics :	a) Field of view 70 degree or more b) Direction of view Forward c) Depth of field 50 mm to infinity d) Recognition Capable of recognizing a human target at least upto a distance of 5 mtrs or more. e) Day/night viewing capability Should be able to recognize objects in pitch darkness (standard dark room) & day light. f) Light Source Eye safe infra-red (invisible to naked eye) g) Lamp Life Minimum 1000 hours of operation		
	3. Articulation Section :	a) Articulation angle 4 ways, up/down/right/left/90 degrees or more (to view 360 degrees). All movements should be controlled with joystick/control lever/ articulation knobs. b) Articulation control Control with power assist mechanism including locking function. All movements should be electronic or joystick/control lever/ articulation knobs controlled. c) Operating temperature -10 degrees C to +45 degrees C or better (in air)		

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-2A (iii)**

CRITERIA	Specifications	Procedure suggested for trial by board of officers	Results expected/Desired
	<b>4. Camera</b> a) Camera sensor CCD OR CMOS b) Camera resolution Should be 300000 pixels or more c) Lens Wide angle 1.8mm or better d) Digital zoom 5X or better <b>5. Audio</b> : Microphone inbuilt/ external in flexible fibroscope Supersensitive audio microphone with 5-7 mtrs audio pickup.		
	<b>6. LCD Monitor :</b> a) Type Handheld LCD monitor to be provided. (shoulder harness/neck strap for monitor is an optional requirement which is to be mentioned by the user at the time of indent). b) Size Minimum – 4” diagonal Maximum – 7” diagonal. c) Control Should have controls for brightness, contrast & zoom. d) Audio video interface Provision for audio & video interface should be provided.		
	<b>7. Recording :</b> a) Encoding wideband MPEG4/JPEG/AVI b) Frame rate 30 per sec or better c) Memory Minimum 32 GB on detachable SD card <b>8. Safety :</b> Should be comply with MIL Std 810 G, IP-67 or better		

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]*

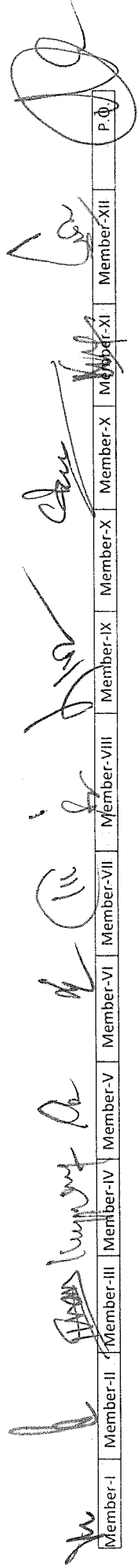
**Appendix-2A (iv)**

CRITERIA	Specifications	Procedure suggested for trial by board of officers	Results expected/ Desired
	<b>9. Power Supply :</b>		
	a) Battery	Rechargeable & replaceable Lithium Battery. Should be available in India.	
	b) Battery working life	Minimum 2 hours in day/night working conditions on full charge.	
	c) Battery charging time	Less than 4 hours	
	d) Weight of complete system excluding carrying case	Operational weight (excluding carrying case) – 2 kg or less.	
	<b>10. Accessories with each Fibrescope :</b>		
	a) Carrying case	i) Soft & hard carrying case with back strap ii) Soft & hard carrying case for transport (water proof)	
	b) Spare batteries	2 Nos. Of spare batteries	
	c) Battery charger	Quantity 01 per fibrescope. Should work with 220V/230V, AC, 50 Hz & battery to battery charging with 12 V battery.	
	d) Belt sets. (Optional requirement to be mentioned by the user at time of indent).	Belt set should enable comfortable operation.	
	<b>11. Literature :</b> Operating & technical literature for each discrete components of system should be in English language.		
	Note : All firms are requested to provide the following : 1. Original Brochure of product by OEM. 2. Detail literature about the product. 3. Comprehensive comments for in-corporation in the specifications.		

 Member-I    
  Member-II    
  Member-III    
  Member-IV    
  Member-V    
  Member-VI    
  Member-VII    
  Member-VIII    
  Member-IX    
  Member-X    
  Member-XI    
  Member-XII

**2.QRs AND TDs OF FLEXIBLE FIBRE OPTIC NASO-PHARYNGO OESOPHAGOSCOPE**

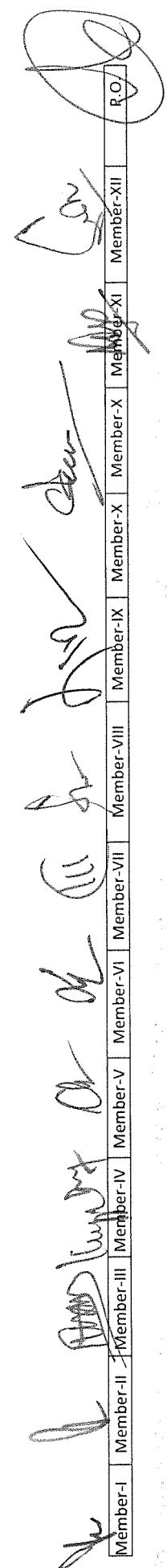
CRITERIA	SPECIFICATIONS	PROCEDURE SUGGESTED FOR TRIAL FOR BOARD OF OFFICERS	RESULT EXPECTED/ DESIRED																																																				
<p><b>General Specifications</b></p> <p><b>Maximum Flexibility :</b></p> <ul style="list-style-type: none"> <li>Flexible fibreoptic endoscopes can access places that cannot be reached with a rigid endoscope.</li> <li>Fibreoptic endoscope design allows light source and video camera versatility to provide compatibility with variety of different medical devices.</li> <li>Maximum mobility can be achieved by an LED battery powered cordless solution.</li> </ul> <p><b>Broad Field of Application :</b></p> <ul style="list-style-type: none"> <li>The FNL product range offers a paediatric model, routine endoscopy models and a therapeutic model with a 2.2 mm working channel.</li> <li>Both diagnostic and therapeutic procedures are within reach with the fibreoptic endoscopes.</li> <li>Optical instruments of the highest quality to support diagnosis and therapy.</li> </ul>	<p><b>High-Quality Fiberoptic Endoscopes :</b></p> <table border="1" data-bbox="927 904 1268 1861"> <thead> <tr> <th rowspan="2">Type</th> <th rowspan="2">Slim</th> <th colspan="2">Naso-Pharyngo-Laryngoscopes</th> <th colspan="2">Therapeutic</th> </tr> <tr> <th>Routine</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Product</td> <td>FNL-7RP3</td> <td>FNL-10RP3</td> <td>FNL-10RBS</td> <td>FNL-15RP3</td> <td></td> </tr> <tr> <td>Insertion tube (0 mm)</td> <td>2.4</td> <td>3.5</td> <td>3.5</td> <td>4.9</td> <td></td> </tr> <tr> <td>Distal end (0 mm)</td> <td>2.2</td> <td>3.2</td> <td>3.2</td> <td>4.8</td> <td></td> </tr> <tr> <td>Instrument channel (0 mm)</td> <td>-/-</td> <td>-/-</td> <td>-/-</td> <td>2.2</td> <td></td> </tr> <tr> <td>Working length (mm)</td> <td>300</td> <td>300</td> <td>300</td> <td>300</td> <td></td> </tr> <tr> <td>Field of view [°]</td> <td>75</td> <td>75</td> <td>85</td> <td>75</td> <td></td> </tr> <tr> <td>Tip deflection up/down [°]</td> <td>130/130</td> <td>130/130</td> <td>130/130</td> <td>130/130</td> <td></td> </tr> </tbody> </table>	Type	Slim	Naso-Pharyngo-Laryngoscopes		Therapeutic		Routine				Product	FNL-7RP3	FNL-10RP3	FNL-10RBS	FNL-15RP3		Insertion tube (0 mm)	2.4	3.5	3.5	4.9		Distal end (0 mm)	2.2	3.2	3.2	4.8		Instrument channel (0 mm)	-/-	-/-	-/-	2.2		Working length (mm)	300	300	300	300		Field of view [°]	75	75	85	75		Tip deflection up/down [°]	130/130	130/130	130/130	130/130		<p>OEM should submit an undertaking regarding its quality and specifications.</p> <p>Board should check and ensure the same.</p>	<p>As per specification.</p>
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Appendix-2A (vi)

3. QR/SPECIFICATIONS OF SURGICAL OPERATING ENT MICROSCOPE

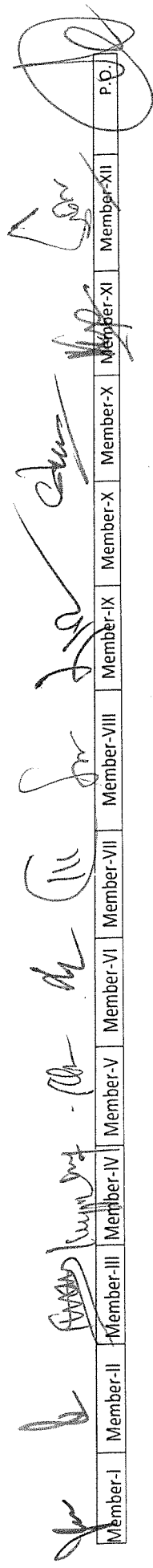
Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
1	The system should have working-distance manual override facility, working distance from 200 mm to 400mm or higher without exchange of objective lens with manual adjustment, integrated continuously variable illumination field.	Board should check physically during demonstration.	As per specification.
2	The system should have Eyepieces: - 10x / 12.5x magnification, dioptre setting from -8D to +5D or better, also suitable for spectacles wearers.	OEM should submit an undertaking and documents in this regard.	
3	It must have binocular tube 0° to 210° tiltable binocular tube with focal length 170mm or higher graduated knob for continuous adjustment of inter papillary distance from 55mm to 75mm, 360-degree rotatable binocular tube.		
	Dimensional parameter : Objective Lens should be 200mm to 400mm Field of view should be 55mm or more		
4	The microscope must have easily manoeuvrable handgrips with adjustable keys for zoom, focus, illumination & magnetic brakes.		
5	It should have latest generation illumination Xenon or LED Cold Light, illumination at par with Xenon 300 Watt. Lamp life 80000 hrs approximately		



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

Appendix-2A (vii)

SI. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
6	The magnification of the system should have motorized zoom 1:6 magnification system with apochromatic optics, Microscope should also have higher magnification upto 14-18x or above without using magnification multiplier / changer.		
7	The system should have routable floor stand on base with lockable castors, carrier and swivel arm large reach, the stand should be overhead capability. It should have free float magnetic system with magnetic brakes for unit stand with release of magnetic brakes by handgrips.		
8	It should have semi-auto/ automatic, or software assisted guided balancing which can be done without manual involvement or rotating knobs.		
9	It should have video camera with recording facility with USB completely integrated full HD 1920x1080 p/ 4K inside the head of microscope and should not be visible from outside.		
10	This should have programming facilities at user end for starting illumination, magnification, working distance, zoom speed and focus speed for different users.		



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.



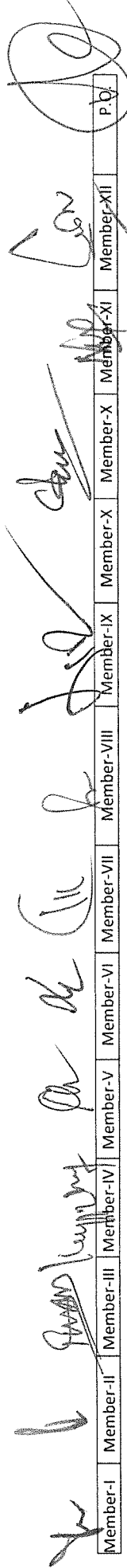
Appendix-2A (viii)

3. QR/SPECIFICATIONS OF SURGICAL OPERATING ENT MICROSCOPE

Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
11	It should have completely integrated 24" or more touch screens monitor and user interface for setting/ changing the parameters of system from monitor.		
12	It should have motorized variable working distance as well as manual adjustment with separate knob to adjust manually during emergency or malfunction of microscope.		
13	It should have quality standard of European CE Certified/ USFDA approved		

4. QRs/TDs OF OTIOLOGY MICRODEBRIDER SYSTEM














Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
1	Single console should be capable of minimum these functions - Debridement, High performance Drill, Sinus burr	Board should check physically during demonstration.	As per specification.
2	Should support simultaneous connection of two motor output with automated motor recognition	OEM should submit an undertaking and documents in this regard.	
3	Should have integrated microprocessor-controlled irrigation pump with quick connect tubing set		



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.

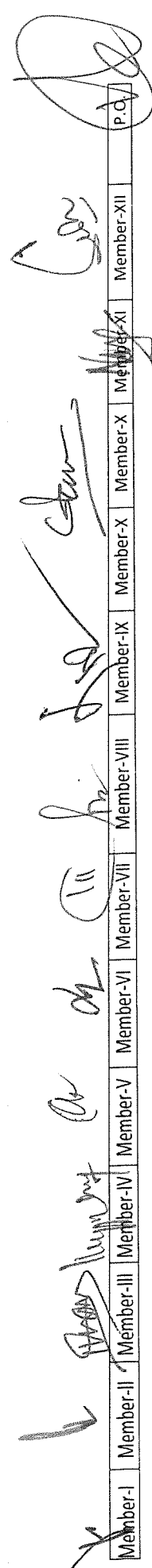
**Appendix-2A (ix)**

Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
4	Should have manual/ Touch screen program display with microprocessor controlled continuously adjustable speed range.		
5	The control of oscillation mode, micro motor, pump and speed should be possible from the console.		
6	Should come with Irrigation Rod, Main's cord, Two pedal foot switch, two-stage with proportional function, Silicon tubing set for irrigation, sterilisable, Spray for cleaning		
7	Should be operable at power supply 100-240 Volt, 50/60HZ.		
<b>Specification for Shaver Hand piece</b>			
9	Shaver hand piece should have ergonomic design and variable handle for comfortable work		
10	Should have special feature for harder surface and faster ablation of soft tissues		
11	Should have change mode of motor rotation: forward or reverse or oscillation from footswitch		
12	Should have max oscillation speed per minute of 5,000		

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

**Appendix-2A (x)**

Sl. No.	Specifications	Procedure suggested for trial for Board of Officers	Result expected/ desired
13	Should have rotational speed per minute mode of 6,000 rpm to 12000 rpm.		
14	Should have straight suction channel and integrated irrigation		
15	Should have quick coupling mechanism for shaver blades and sinus shavers		
16	Should be completely immiscible and machine washable		
17	Should be autoclavable		
<b>Specification for Shaver Blades</b>			
1.	Shaver blades should be disposable/reusable and available in following configurations and color coded for easy identification		
2.	4mm, 0 Degree double serrated cutting edge – 5units		
3	4mm curved 40°, cutting edge serrated backwards, double serrated – 5 units		
4	4mm curved 60°, cutting edge serrated backwards, double serrated -5		



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