

# **All India Institute of Medical Sciences (AIIMS), Mangalagiri, AP**

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## **OPD Equipment Procurement by AIIMS Mangalagiri**

Ref.No: AIIMS/MG/Admin/Bid Tender/06/2018-19/LPC/19

Date: 13-10-2018

Sub: OPD Equipment Procurement by AIIMS Mangalagiri- Reg.

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- This is to bring to your notice that AIIMS Mangalagiri is in a process of procuring OPD Equipment and for this we invite quotations as per the specifications attached to this document.
- The last date of receiving quotations is ten days from the date of opening in the AIIMS Mangalagiri Website i.e. 22/10/2018.
- The document is uploaded in the website for open information to the vendors/manufacturers.
- The quotations should be sent to [lpc@aiismangalagiri.edu.in](mailto:lpc@aiismangalagiri.edu.in) with copy to [dda@aiismangalagiri.edu.in](mailto:dda@aiismangalagiri.edu.in)

### **OPD Equipment Procurement by AIIMS Mangalagiri**

Important note for supplier:

1. Each item is a separate equipment for comparison of quotes.
2. The total price is an all-inclusive cost.
3. In case it is found that TOTAL PRICE of any item (Item × Quantity) exceed the GFR limit of Rs.2,50,000/-, the LPC committee may exclude such items from its purview and will request AIIMS Administration to proceed ahead with Limited Tender process with the REGISTERED VENDORS with AIIMS Mangalagiri. The Administration may vary the quantity of items to be procured or go ahead with LTE.
4. The quotations are to be provided as per enclosed specifications. No variation will be acceptable in the supplied equipment. The Final decision lies with the discretion of the Local Purchase Committee, AIIMS Mangalagiri.
5. Minimum onsite warranty of 2 years is required.

<b>S.No</b>	<b>Name of the Instrument</b>	<b>Qty</b>	<b>Unit</b>	<b>Remarks</b>	<b>Unit Price (Rs)</b>	<b>Total Price (RS)</b>
1	Sphygmomanometer Aneroid	5	No.	As per Specification		
2	Patient weighing machine- Analog with Integrated Height Scale	8	No.	As per Specification		
3	Stethoscope	8	No.	As per Specification		
4	Laryngoscope	6	No.	As per Specification		
5	OPD Examination Spot Light	8	No.	As per Specification		
6	X Ray Viewer (LED) 2 panel	8	No.	As per Specification		
7	Automatic Blood Pressure Monitor on Roller stand	7	No.	As per Specification		
8	Glucometer with strips	3	No.	As per Specification		

9	Handheld Doppler (For OBG only)	3	No.	As per Specification		
10	Mobile Examination Lamp	1	No.	As per Specification		
11	Weighing machine with Integrated Height scale – Paediatrics	3	No.	As per Specification		
12	Infantometer (For Paediatric only)	3	No.	As per Specification		
13	Plaster cutter (Electric) with 10 blades	3	No.	As per Specification		
14	Knee Hammer	6	No.	As per Specification		
15	Finger tip Pulse Oximeter	3	No.	As per Specification		
16	Ophthalmoscope (for Medicine & Paediatric)	2	No.	As per Specification		
17	Ophthalmoscope for Eye OPD	4	No.	As per specification		
18	Nebulizer (For Medicine, Paediatric, Respiratory etc)	3	No.	As per Specification		
19	ECG Machine 12 channel (For General Medicine only)	1	No.	As per Specification		
20	Surgical Loupes (for Dermatology only)	3	No.	As per Specification		
21	Digital Haemoglobinometer Portable (For Medicine & OBG)	2	No.	As per Specification		
22	ENT OPD Examination Set	6	No.	As per Specification		
23	Otoscope	3	No.	As per Specification		
24	Head Light – ENT	3	No.	As per Specification		
25	Hot Air Oven	1	No.	As per Specification		

26	Digital Visual Acuity Chart with remote	2	No.	As per Specification		
27	Trial Lens set with frames	4	No.	As per Specification		
28	Streak Retinoscope	4	No.	As per Specification		
29	Manual Keratometer	2	No.	As per Specification		
30	Portable Autoclave	1	No.	As per Specification		
31	Eye OPD Examination Set	1	No.	As per Specification		
32	Digital Lensometer	2	No.	As per Specification		
33	Synoptophore	2	No.	As per Specification		

## Specifications

1. Sphygmomanometer Aneroid

BP Apparatus Aneroid	
<b>1</b>	<b>Technical Specifications</b>
1	Should have BP range from 0 to 300 mm Hg
2	Should be mercury-free and latex-free
3	High quality single tube pressure cuff in at least three sizes - Adult, Paediatric and Infant
4	Should have gear-free technology
5	Should have 360 degree rotatable dial with a clip so that reading can be taken from any angle.
6	Should have an accurate barometer with large digits
7	Large insufflation bulb. Insufflation bulb to have adjustable spoon to permit both handed operation
8	Screw-type pressure release valve with capability to release pressure in 2 mm Hg decrements
9	High quality anti static tubing to connect bulb with cuff minimum length 1300 mm
10	Approved Make: Welch Allyn, Diamond, Omron, Richter

2. Patient weighing machine – Analog with Integrated Height Scale

Patient weighing machine-Analog with Integrated Height Scale	
1	<b>Technical Specification</b>
1	Weighing capacity should be atleast 140Kg
2	Weight graduations should be 0.5Kg
3	Should be equipped with height rod
4	Should measures height 60-200cm
4	Height graduations should be 1mm
5	Should have circular/rectangular weighing platform
6	Should have the ISO 13485 certification and the copy of the same should be enclosed along with the technical bid.

3. Stethoscope

**Stethoscope**

1	<b>Technical Specifications</b>
1	Should have high quality sound transmission.
2	Length - 27" to 29"
3	Weight - 6 ounce to 7.6 ounce (Approx.)
4	Chest piece with Diaphragm & bell- Ø45mm(adult) , - Ø35mm (paediatric)
5	Tubing should be Tropicalized
6	Preferable colour -black
7	Should have tight and soft sealing ear tips
8	Approved Make: Welch Allyn, Heine, Littman

**4. Laryngoscope**

<b>Laryngoscope-Adult and Paediatric</b>	
<b>1</b>	<b>Technical Specification</b>
1.1	Should supply 4 different size standard blades and one handle for adult and pediatric separately and one short sturdy handle.
1.2	Should be stainless steel matt finish
1.3	Should provide curved blades for both adult and pediatric
1.4	An extra large blade should be supplied along with each scope
1.5	Should be provided with battery
1.6	Should have LED light source with 3 spare bulbs
<b>2</b>	<b>Standards, Safety and Training</b>
2.1	Manufacturer should have ISO certification
2.2	Warranty as per tender condition



**5. OPD Examination Spot Light**

<b>Sl No.</b>	<b>OPD Examination Spot light</b>
<b>1</b>	<b>Technical Specification</b>
1.1	To provide cool, intense, focused light of 5000 lux.
1.2	Should be LED lamp
1.3	Should have bulb retainer to prevent accidental unplugging and fall.
1.4	Should have protective shade with holds on top to dissipate heat.
1.5	It should be Wall mounted with flexible arm and arm should reach upto examination couch
1.6	Maximum height – 170 cms
1.7	Tubing of MS, pretreated and epoxy powder coated.
1.8	Cable length – 2m
<b>2</b>	<b>Standards, Safety and Training</b>
2.1	Manufacturer should have ISO certification

6. X Ray Viewer (LED) 2 panel

X ray Viewer (LED) 2 Panel	
1	<b>Technical Specification</b>
1	Specialty X- Ray Film LED based View Box for viewing CT/ MRI/ Diagnostic X-ray films with External Electrodes Fluorescent Lamp Technology.
2	Unit suitable for viewing Films of size upto 14" x 17" in single Panel.
3	Light weight & Slim, giving uniform light output with adjustable light output(dimmer Option) with automode
4	Uniform light output of around 12000Lux
5	Panel thickness not more than 1"
6	Wall mounting.
7	Lamp Life time should be longer over 20,000 hours.
8	The unit is to operable on 220V
9	It should be CE/ FDA/BIS certified product

7.	<b>Automatic Blood Pressure Monitor on Roller stand</b>
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Automatic Blood Pressure Monitor on Roller Stand	
SI No	
1	Professional Digital BP Machine for Clinical use
2	Manual and Automatic mode
3	3 average BP monitoring
4	It should be mounted on a roller stand with Cuff basket
5	Should run on AC and inbuilt Rechargeable battery with charger
7	It should have Adult & Pediatric Mode
9	Approved Make: Welch Allyn, Omron, Heine, Richter

8.

Glucometer with strips

### Glucometer

1	Technical Specification
1.1	Should have precise digital temperature control with selectable range of 37degree celsius to 42 degree Celsius
1.2	Measuring range should be 20 to 400 mg/Dl
1.3	Arterial, Venous and capillary whole blood specimen capability
1.4	Sampling methodology should be electrochemical
1.5	Sampling volume should be less than 10 microlitres
1.6	Should have LCD display
1.7	Should have automatic shut off.
1.8	Should be supplied along with QC and calibration kits.
1.9	Should have memory for at least 10 patient results.
2	Standards, Safety and Training
2.1	Munufacurer should have ISO certification
2.2	Product should be European CE/ US FDA/BIS approved
2.3	Should be supplied with 500 disposable strips

9.	<b>Handheld Doppler (For OBG only)</b>
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### **Hand held Doppler**

Light Weight,handset,portable

Large LCD display with blue backlight

Built-in loudspeaker gives sound more loud and clear

Support 2Mhz,2.5Mhz,3Mhz waterproof probe ,Accurate FHR detection with clear sound

Monitor 12 weeks above unborn baby's blood wall pulsate.

High-quality noise-resistant speakers

Simple one-button operation

The ultrasound dosage is under 50% of the national ultrasonic power standard.

10.

Mobile Examination Lamp

SL NO	EXAM LAMP-MOBILE
1	<b>Technical Specification</b>
1.1	To provide cool, intense, focused light of 5000 lux.
1.2	Should be halogen bulb of 50/75 W at low voltage, Step down transformer (compact) mounted inside the head.
1.3	Should have bulb retainer to prevent accidental unplugging and fall.
1.4	Should have protective shade with holds on top to dissipate heat.
1.5	5 spokes stand mounted on caster of 5cm diameter.
1.6	Maximum height – 170 cms
1.7	Tubing of MS, pretreated and epoxy powder coated.
1.8	Cable length – 2m
2	<b>Standards, Safety and Training</b>
2.1	Munufacturer should have ISO certification

11. Weighing machine with Integrated Height scale – Paediatrics

Weighing Machine-Pediatrics

1	Technical Specification
1	Sturdy material with stable bassinet
2	Bassinet : curved surface to prevent fall of baby
3	Sensitivity : $\pm 1-2$ g
4	Functions:
	a. Tare
	b. Hold
5	Baby Bassinet : acrylic material
6	LED display : large enough to be visible from a distance 4-6 feet
7	Automatically switches off after 5-10 minutes of non-use
8	Runs on mains : 220-240 V and inbuilt battery minimum back up 60 minutes
9	Capacity : 100g to 10 kg
10	ISO 9001 certified manufacturer (certificate to be submitted).
11	It should be CE/ FDA/BIS approved product
12	Supplied With Each Unit
13	Fuse : 10

<b>12.</b>	<b>Infantometer (For Paediatric only)</b>
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### **Infantometer (For Paediatric only)**

Designed for measurement of premature infants, neonates and children up to approximately 24 months.

Robust, extra large construction for precise measuring.

Automatically correct lying position due to trough-shaped lying area.

Scale printed along top side for easy reading.

Sliding rule provides easy-to-read, color-coded graduations from 0" – 40" in 1/8" increments and 0 – 100cm in 1cm increments.

Improved spring hinge automatically secures outer flaps at right angles, assuring accuracy.



**PLASTER CUTTER**

1. Should have a fiber body.
2. Should be able to cut fiber gauzes.
3. Blades should be corrosion resistant and highly durable.
4. Blades should have hexagonal mounting hole.
5. Should be supplied with 84mm, 74mm, and 64mm diameter blades.
6. Should be supplied with required tools for replacing the blades, brush and duster.
7. Should be supplied with carrying case to accommodate the plaster cutter and other accessories.
8. Should have a protective guard and gloves.
9. Should be oscillating type
10. Should work with input 200 to 240Vac 50 Hz supply fitted with Indian plug
11. Additional Accessories
  
12. This is capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%
13. Blades (84mm/64mm or better) - 6Nos
14. Certificate of calibration and inspection. List of Equipments available for providing calibration and routine preventive maintenance Support.
15. Should be FDA,CE,UL or BIS approved product.
16. Manufacturer should have ISO certification for quality standards.
17. Comprehensive training for lab staff and support services till familiarity with lthe system on site.
18. Comprehensive warranty for 2 years and 5 years AMC after warranty.
19. Certified to be meeting Electrical safety standards for medical equipments as IEC-60601-1 General Requirements

### **Knee hammer**

1. Able to test deep tendon reflexes
2. A rubber component should be attached to a flat metallic handle
3. Should have T shape a, double point solid rubber with reflex point and brush
4. Brass nickel plated solid handle with brush and pin end
5. Rubber ring should be available in red or black color.
6. Designed to perform all reflex tests with less effort and greater patient comfort by combining the functions and features.
7. Warranty , precision and quality about the product may be attached.

<b>15.</b>	<b>Finger tip Pulse Oximeter</b>
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## **PULSE OXIMETER**

### **TECHNICAL SPECIFICATIONS**

1. Should have plethismographic wave form with numeric display for SPO2 and Heart rate on LCD/TFT display.
  2. Should have a SPO2 range of 0 to 100%.
  3. Should have SPO2 accuracy of  $\pm 2\%$ .
  4. Should provide bar graph for pulse strength.
  5. Audio and visual alarm for both upper and lower SPO2, Heart rate.
  6. Should provide with adult reusable finger probe with technology from standard reputed companies.
  7. Beep sound and alarm sound should have separate volume control
  8. Should have a minimum of 2 hours back-up time.
  9. Should be a portable, light weight and desktop model.
  10. Should work with input 200 to 240Vac 50 Hz supply.
  11. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
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**16. Ophthalmoscope (for Medicine & Paediatric)**

<b>Ophthalmoscope</b>	
<b>1</b>	<b>Technical Specification</b>
1	Should be rechargeable battery operated.
2	Should have red-free and cobalt blue filters.
3	Should have LED illumination
4	Should have small and large spot sizes, fixation targets, slit aperture, hemi-spot and cobalt blue filter.
5	Should have wheel control with lens powers ranging from +20D to -35D
6	Should have illuminated lens dial.
7	Should have rubber brow rest.
7	Should have dust free optics and a spherical optical system.
8	Should have inbuilt rechargeable battery with charger
9	Should be supplied with a carrying case.
10	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
Approved Make: Welch Allyn, Heine, Keeler	

17. Ophthalmoscope for Eye OPD

Ophthalmoscope for Eye OPD	
1	<b>Technical Specification</b>
1	Should be battery operated.
2	Should have red-free and cobalt blue filters.
3	Should have LED illumination
4	Should have small and large spot sizes, fixation targets, slit aperture, hemi-spot and cobalt blue filter.
5	Should have wheel control with lens powers ranging from +20D to -35D
6	Should have illuminated lens dial.
7	Should have rubber brow rest.
7	Should have dust free optics and a spherical optical system.
9	Should be supplied with a carrying case.
10	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
Approved Make: Welch Allyn, Heine, Keeler	

18. Nebulizer (For Medicine, Paediatric, Respiratory etc)

Nebulizer	
1	It should be compressor based
2	Nebulization rate should be 0-0.5 ml/min
3	MMAD should be less than 5 $\mu\text{m}$
4	It should be supplied with adult and Pediatric mask and tubing
	Approved Make: Omron, BPL

**19. ECG Machine 12 channel (For General Medicine only)**

ECG Machine-12 Channel			
SN	Technical Specification		
1	Twelve channel 5.7" or more LCD display for all 12 leads along with on screen details.		
2	Recording for 12 channels simultaneously and have option for user selectable any lead as Rhythm lead. Can able to print ECG at A4 size paper through inbuilt printer.		
3	Recording speed selection of 5, 10/ 12.5, 25 and 50 mm/sec.		
4	Sensitivity of 2.5,5,10,20 mm /mV. It should also have AGC (Automatic Gain Control)		
5	Facility to enter patient information (Patient ID, Name, Age, Sex, Hospital's name) which get updated in system and is recorded on the recorder A4 paper		
6	Patient memory function 20 patients or more		
7	Waveforms can be recorded.		
8	Interpretation software.		
9	Mains and in built rechargeable battery backup atleast 2 hrs/ 30 ECG		
10	Should have USB port/SD card (to be supplied by the bidder)/ equivalent port to send the data in the Computer.		
11	Equipment should be European CE with four digit notified body number or BIS or US FDA approved and certificate to be submitted.		
	<b>BOQ</b>	<b>Qty</b>	<b>UOM</b>
1	ECG Machine as per Specification with standard accessories	1	No
2	Interpretation software.	1	No
	Added para under BOQ: ECG paper	500 patients	

20.	<b>Surgical Loupes (for Dermatology only)</b>
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### SURGICAL LOUPES

#### A. LOUPE:

The Surgical System should mainly consist of the optical system, titanium eyeglass frame and standard accessories

#### B. OPTICAL SYSTEM:

1. Galilean optical system featuring compact design, delivering precise image with good colour fidelity extending to the peripheral zones, excellent depth of field of view ensuring clear visualization of anatomical structures.
2. Magnification : 2.5/3/3.5 X
3. Working Distance ( Eye to operating area) of 550 mm or more
4. Field of view diameter at working distance of 550mm : 110mm or more
5. Quick adjustment of interpupillary distance from 55mm to 80 mm by means of left and right coaxial knobs to suit individual surgeons.
6. High Quality scratch free lens protection device with anti-reflection coating shielding the objective lens against tissue debris for increased protection
7. High quality surface of the optical system resistant to standard disinfectants
8. Telescopic rail enabling quick positioning of the eye piece with a single adjustment.
9. Quick adjustment of eyepiece tilt to desired viewing angles even in extreme treatment options
10. Flip up function for unobstructed vision and eye contact with patients with single adjustment
11. Mount for easy attachment and removal of the optical system
12. Serializable contact guard for reliable swinging of the optical system up and down.

#### C. EYE GLASS FRAME

1. Sturdy titanium eyeglass frame with straight temples, elastic headbands, soft nosepiece for comfortable fit and maximum wearing comfort and neutral lenses protecting against splashes and particles,
2. Frame size 53 – 20 mm ( Medium),: suitable for surgeons with prescription lenses
3. Side shields for protection against splash and particles

#### E. STANDARD ACCESSORIES:

Objective lens protective device(2), Contact Guard (2), Side Shield (2) cleaning cloth for optical components, Allen Key, High quality soft case for protection of the surgical loupe and accessories.



21. Digital Haemoglobinometer Portable (For Medicine & OBG)

Digital Hemoglobinometer
1. Should be portable battery operated device with charging facility that provides a digital hemoglobin value as an output.
2. The device should have measurement range from 1 to 20gm/dL.
3. The measurement device should use cuvettes to collect blood sample for analysis.
4. Measurements to be done using a capillary blood, with 10microliter of blood sample.
5. Results to be displayed within 60 seconds.
6. Internal calibration facility should be available.
7. 1000 cuvettes should be supplied with the initial purchase of equipment

22.	ENT OPD Examination Set
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ENT OPD Examination Set		
1	Aural Speculam Set (Set of 4)	1 set
2	Jacobson Horne Probe	1 no
3	Tunning Fork (256,512 & 1024)	1 set
4	Crocodile Forcep	1 no
5	Thudicum Speculum Set (3 sizes)	1 set
6	Killians Speculum Set (3 sizes)	1 set
7	Pilcher Speculum	1 no
8	Eustachian tube catheter	1 no
9	Lucs Tongue Depressor	10 nos
10	Indirect Laryngoscope mirror with handle (Size 3,4,5)	2 set
11	Posterior rhinoscopy Mirror with Handle (Size 1,2)	2 set
12	Tilley Hankel nasal packing forceps	2 nos
13	SS Instrument Tray with Lid Min 12"	1 no
14	Kidney Tray	2 no
15	SS Bowl small	3 no

23.	Otoscope
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<b>Otoscope</b>	
<b>1</b>	<b>Technical Specification</b>
<b>1.1</b>	Should be a convenient handheld type otoscope.
<b>1.2</b>	Should have LED Light with Fiber Optic light delivery system.
<b>1.3</b>	Should be able to detach the otoscope head.
<b>1.4</b>	Should provide no reflections and obstructions.
<b>1.5</b>	Should provide detachable accessories of various sizes.
<b>1.6</b>	Should have in built rechargeable battery with charger
<b>1.7</b>	Magnification should be 3.5x
<b>1.8</b>	Should have Pneumatic attachment
<b>1.9</b>	Munufacurer should have ISO certification
	Approved make - Welch Allyn, Heine, Keeler

24.

Head Light – ENT

ENT Head Light	
SL .No.	Technical Specification
1	Integrated battery/battery light source that allows more freedom of movement.
2	No separate light source required
3	No separate light cable required
4	No mains supply required
5	Low energy consumption
6	No need to change the lamp (Atleast50,000 hours of service life)
7	Available with rechargeable battery option
8	LED white light Only
9	Luminosity adjustable from 10 to 100 mm at a working distance of 40 cm
10	Soft flexible headband
11	Ergonomic fit
12	Easy vertical and horizontal adjustment to the shape of head
13	Extension cable for attaching the rechargeable battery and battery box to the clothing
14	All accessories should be from the same manufacturer and should be European CE/ US FDA approved

### Hot Air Oven

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1. Should be operated on 230V, 50Hz single phase AC supply and having temperature ranging between 50-200°C
  2. Should be made of double walled chamber -Inner made of stainless steel SS 304 grade and powder coated outer surface.
  3. Should provide with three heating elements on three sides of the equipment for uniform temperature on all shelves.
  4. Should be provided with air circulating fan.
  5. Should provide with a variable microprocessor based digital temperature controller with digital display and thermometer should be provided separate.
  6. Should have a minimum chamber size of (L\*B\*H) 450\*450\*605 with 2 stainless steel trays with holes.
  7. Should provide with air ventilations.
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### Digital Visual Acuity Chart with remote

1	<b>Technical Specification</b>
1	The unit should be compact & light weight
2	Design should be suitable for all refraction rooms and should be easily mountable on refraction unit and wall
3	All functions should be able to operate by cord-less remote control i.e. chart up, chart down, vision test light, spot light, colour test light, Duochrome test light.
4	Cord-less remote should work from any direction
5	The regular sequence of charts should be offered in: English, Hindi, Regional Language, C and/ E chart, Dot chart, Snellen, Ishihara Chart, Astigmatic fan, and Log Mar chart
6	All charts should be available up to 6/4 vision (over correction)
7	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.

S.N	TRIAL LENSE SET with Frames
<b>1</b>	<b>Technical Specification</b>
1.1	Should be supplied with set of 226 trial lens with durable metal frame
1.2	<b>Lens set-</b> Set of 226 trial lenses with polished metal rims in an elegant carrying case.
	a. 70 Spherical Concave Lenses: 0.12 to 20.00 Diopters (0.25D increments)
	b. 70 Spherical Convex Lenses: 0.12 to 20.00 Diopters (0.25D increments)
	c. 34 Cylindrical Concave Lenses: 0.12 to 6.00 Diopters (0.25D increments)
	d. 34 Cylindrical Convex Lenses: 0.12 to 6.00 Diopters (0.25D increments)
	e. 12 Prismatical Lenses: 0.5(2), 1(2), 2(2), 3, 4, 5, 6, 7, 8
	f. 6 Accessory Lenses: Red, Green, Slit, Dark, Aperture(2), Maddox Rod, occluder, Pin-Hole
	g. Two sets of near vision booklet
	h. Supplied with dedicated wooden box
1.3	<b>Metal Frame(Adult&amp; Pediatric)</b>
	a. Should be durable and light weight
	b. Number of lenses which can be inserted in to left or right lensframe simulataneously:4 pieces
	c. Degree of lens rotation around optical axis in the lens frame:360 degree
	d. Horizontal and vertical bridge adjustments.
	e. Free-rocking saddle bridge assures comfortable nose fit. Range of nose rest adjustment Length:0 ~ 14 mm,angle:0 ~ 30 degree
	f. Separate PD adjustment for each eye to compensate for asymmetrical factors in facial structure. PD of both eye: 48 ~ 80 mm Left or right PD: 24 ~ 40 mm
	g. Individual adjustments for temple length and angle.
	h. Adjustment for rotating cylinders to correct axis.
	i. Scales with large, easy-to-read numerals.
<b>2</b>	<b>Standards, Safety and Training</b>
2.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.

S.N	STREAK RETINOSCOPE
<b>1</b>	<b>Technical Specification</b>
1.1	Should have an external focusing sleeve which is easy to grip and manipulate.
1.2	Should have crossed-linear polarizing filter, optional orange filter
1.3	Should allow one-hand operation for streak focus and 360° streak rotation.
1.4	Should be interchangeable to plane mirror and concave mirror mode by sleeve movement.
1.5	Should use LED streak lamp.
1.6	Should have 100% dust proof housing and multi-coated optics.
1.7	Should have detachable brow rest for spectacle wearer
1.8	Should be battery operated
1.9	Should have a carrying case.
<b>2</b>	<b>Standards, Safety and Training</b>
	Approved Make: Welch Allyn, Heine, Reister, Keeler



Manual Keratometer	
1	Should have 15x eye piece
2	Should measure corneal refractive power measuring range from 36 to 52 D in steps of 0.25D steps
3	Should measure corneal radius of curvature measuring range from 6.5 to 9.4 mm in steps of 0.05mm.
4	Should permit measurements of central corneal area
5	Should have high accuracy of measurements.
6	Should have dust cover and spare bulb.
7	Should be supplied with motorized table.
8	Should have well illuminated circular mires with + sign.
9	The manufacturer should be ISO 13485 certified

### TABLE TOP AUTOCLAVE

#### Specifications

1. Sterilizer Type: Table Top Sterilizer.
2. Capacity: more than 20 liters
3. Chamber Size: The sterilizer should have Rectangular/Cylindrical chamber with suiting the volume for
4. Maximum processing capacity per charge.
5. Quality System Compliance: Sterilizer should comply the quality systems as per ISO 9001:2000, EN ISO
6. Types of Cycles Process: Table Top Sterilizers should be equipped with B-process as per latest
7. International standards
8. Should be made of S.S.316 & should comply the Pressure Equipment Directive (PED) & EN 13445 norms or equivalent
9. Chamber should have minimum 5 years warranty or should confirm 44-50,000 process minimum life.
10. Chamber should have working pressure 2.2 bar & design pressure upto 3.8 bar.
11. Chamber should have Stress & Fatigue analysis reports for material & construction of the pressure vessel.
12. Chamber should be equipped with electrically heated jacket for preheating on stand by mode
13. Should have horizontal sliding/Hinged door with silicon elastomer rubber gasket to withstand temperature upto 140°C.
14. A disposable air filter should be provided for filtering the atmospheric air before entering inside the chamber. The filter separation efficiency should be higher than 99.998% for particle size less than 0.3µm
15. 134°C Wrapped & Unwrapped
16. 121°C Wrapped & Unwrapped
17. 134°C Flash/Rapid open instrument cycle.
18. 134°C Textile.
19. 134°C Prion.
20. Test programs: Bowie & Dick, Leak Test, Helix Test
21. Sterilizer should have inbuilt water reservoir with storage capacity of 3 – 5 Litres. The water reservoir should have easy access for cleaning & to avoid bio film.
22. Sterilizer should have inbuilt steam generator with warranty of 5 years on heating elements. The steam generator design should be with integrated energy storing system for building up power for sterilization loads in short time
23. The control system should be microprocessor based PLC system specially designed for sterilization applications. The control system should have CPU processor. Digital input/output controls, analog measuring inputs & COM ports for printer.
24. Alarms

25. Automatic process checking & failure correction should be possible by the control system. The range of alarm should include Temperature & pressure sensor failure, phase time- out, doors not properly closed, power failure (less than 10 sec should be ignored), continuous self checking of all the safety devices, low water level etc. All the alarms should be audio-visual

26. Accessories

27. The sterilizer unit should include Rack with at least 5 levels & suitable size instrument trays should be the part of the supply for every sterilizer.

28. Standards & Norms

29. The sterilizer must comply the following standards, ISO 9001:2000 (Quality Systems), ISO 13485:2003 (Quality Systems for Medical Devices), ISO 14001 (Environment Management System).

30. The product should be US FDA or European CE Certified.

31. Bidder has to give the demonstration of the entire quoted product as and when required.

**Added Para: There should be separate tank for clean water as well as for contaminated water**

**Added Para: All tubing, fixtures, fuses, spares and reusable and accessories should be supplied along with the equipment. The supplier should also provide the list of spares, fixtures and installation diagrams with the quote**

Eye OPD Examination Set		
1	Universal Eye Speculum	10 nos
2	Punctum Dilator	5 no
3	Lacrimal probes Set	2 set
4	Epilation Forceps	5 no
5	Utility forceps	5 no
6	MacPherson Forceps(Angled)	5 Nos
7	Infant Wire Speculum	2Nos
8	Suture Tying Forceps(Straight & Curved)	3 Each
9	Conjunctival Scissor	5Nos
10	Desmmares Lid Retractor	6 Nos
11	Adson Toothed(For Skin Holding) Forceps	3Nos
12	Needle Holder(Micro)	2 nos
13	Chalazion Clamp & Curette	2 Sets
14	BP Handle	2 no
15	Sterilization tray	2Nos

S.N	LENSOMETER - DIGITAL
1	<b>Auto focus /Auto alignment/Auto centring</b>
1.1	2. Contact lens module
1.2	3. Able to detect power of progressive lenses
1.3	4. Able to detect UV absorption capacity of lenses both UV A & UV B with visible light transmission qualities of the lens.
	5. Spherical Power: -25D to +25D
	6. Cylinder Power: 0D to $\pm 10D$
	7. Axis: 0 Degrees through 180 Degrees (1 Degree Steps)
	8. Addition: 0D to $\pm 10D$
1.4	9. Prismatic Power: 0 to 10 Prism Diopter and prism base direction 0-360 deg {1 deg steps (0-180deg) and 5 deg step (0-180 deg)}
1.5	10. UV Transmittance Measurement: 0 to 100% (1% Increments)
1.6	11. Pupillary Distance Measurement: 40 mm to 90 mm
1.7	12. Lens Power Measuring Wavelength: 630 nm
1.8	13. UV Transmittance Wavelength: 375 nm
1.9	14. Measurement Modes: Single Vision, Bi-Focal, Progressive, Prism, UV, Hard and Soft Contact Lenses, high index lenses.
1.10	15. LCD/TFT monitor 5" or more
2	<b>16. Printer attachment and auto save facility</b>
2.1	17. Power: 220- 240 V
2.2	<b>18. Abbe no. 30-60 at least.</b>
	19. Measurable lens diameter –
	<b>(a) Spectacle lenses – 30 to 100 mm. (b) Contact lenses- Larger than the inner diameter of the nose piece.</b>
	20. Facility for marking centration of the lenses.
	<b>21. Should be USFDA or European CE approved product.</b>
	22. Should be supplied with 10Nos of printer paper rolls
	23. Should be supplied with suitable table for machine

S.N	SYNOPTOPHORE
<b>1</b>	<b>Brief Description of function</b>
1.1	An instrument for diagnosing imbalance of eye muscles and treating them by orthoptic methods
<b>2</b>	<b>Technical Specification</b>
2.1	Adjustable range of pupil distance should be 50 - 75mm
2.2	Movement of Optical Tubes should have the following specification
	a. HORIZONTAL :
	Adduction +50 degree
	Abduction - 40 degree
	b. VERTICAL :
	Hyper 30 degree
	Hypo 30 degree
	c. TORSIONAL :
	Excyclo 20 degree
	Incyclo 20 degree
2.3	Slide Illumination : Rheostat controlled 12V Lamp for each slide. After Image Illumination by 12V Lamp (for better Illumination)
2.4	Should have auto Flashing of Slide Illumination either SIMULTANEOUS or ALTERNATE in RAPID & VARIABLE mode.
2.5	Mode & Mode Selection ie, Five Modes of Slide Illumination namely NORMAL, FLASHING RIGHT, FLASHING LEFT, FLASHING R + L & AUTOFLASHING, should be able to select by a single selector knob.
2.6	Standard Accessories to be included:
	a. A set of slides containing 9 Pairs.
	b. Haidinger Brushes.
	c. Power Cord
	d. Dust Cover
	e. Two Spare Bulbs 12V
	f. Motorized Instrument Table
2.7	Additional Items: It should be supplied with
	1. Prism Bar sets,
	2. Titmus fly and Random dot stereopsis test plates with polarized glasses
	3. Bagolini's glasses.
<b>3</b>	<b>Standards, Safety and Training</b>
3.1	Should have the ISO certification and the copy of the same should be enclosed along with the technical bid.
3.2	The quoted model should have US FDA/BIS/European CE certificate and copy of the same should be enclosed along with the technical bid.