



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ



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## ANNEX 1

### SPECIFICATIONS

#### CATEGORY 1

#### REQ. QUANTITY

#### AUTO REFRACTOMETER

01 Nos

##### **Description:**

1. The refractometer should be digital, compact in design & with reliable optics.
2. Multiple measurement modes should be available.
3. Automatic Chin rest base and main body lifting should be available.
4. Support multiple measuring functions.
5. Automatic fog colour vision system should be available.
6. RI measurement range up to 1.32 to 1.70 or better.
7. Sample cover for volatile samples.
8. Brix measurement range up to 0 to 95%.
9. Temperature control: Automatic with built-in Peltier Thermo Module.
10. Temperature control range with Peltier: 10°C to 80°C or better.
11. Resolution (RI): 5 digits or better
12. Accuracy (RI): 4 digits or better
13. Light source: LED lamp with an average lifetime of 100,000 h or better
14. Data Interfaces: RS 232 port for printer connection, USB port.
15. Data Export should be in PDF/Excel.
16. Automatic Peltier/thermostat temperature control.
17. 21CFR Part 11 compliance.
18. Visual distance: 0 mm: 12 mm: 13.75 mm.
19. Minimum pupil diameter: 2.0 m.
20. Manufacturer's standard warranty with documents should be available.
21. Operators' manual and Service manual should be provided.

##### **Required accessories and consumables:**

1. Internal memory or (Pen drive/portable Hard disc) and compatible colour printer

##### **Standards and Power Requirements:**

1. USFDA, CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

##### **Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.



**CATEGORY 2**  
**DIGITAL VISION CHART**

**REQ. QUANTITY**  
**01 Nos**

**Description:**

1. Display Type white LED
2. Display Size should not be less than 20 inches.
3. Chart should contain visual functions Red/green test, astigmatism, heterophoria, stereoscopic vision etc.
4. Chart-should have optometry images Landale ring, numerals, alphabets, tumbling E, pictures-etc.
5. Should have the wall mounting accessories.
6. It should be a remote-controlled, wall-mountable device.
7. Should have manufacturer's standard warranty.
8. Product should be a reputed brand which is widely in use.

**Required accessories and consumables:**

1. If there is any power adaptor available should be provided extra one more.

**Standards and Power Requirements:**

1. USFDA, CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

**Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.



**CATEGORY 3**  
**OPHTHALMIC UNIT**

**REQ. QUANTITY**  
**01 Nos**

**Description:**

**OPHTHALMIC UNIT FEATURES AND REQUIREMENTS**

1. Consisting of ophthalmic stand and ophthalmic chair
2. To provide an ideal combination of space and examination efficiency,
3. Smooth sliding tabletop for slit lamp and keratometer etc.
4. Overhead lamp controlled by the main panel
5. Arm for chart projector
6. Standard footrest for the ophthalmic chair
7. Operator manual (English)
8. Service manual including circuit diagrams and spare parts list (English)

**Required accessories and consumables:**

1. Spare lamps for the overhead lamp 2 Nos.

**Standards and Power Requirements:**

1. USFDA, or CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

**Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables, and minimum supplies to be stated clearly.



**CATEGORY 4**

**SLIT LAMP**

**REQ. QUANTITY**

**01 Nos**

**Description:**

1. Slit width - 0-14 mm adjustable
2. Slit length 0.1 -14mm adjustable
3. Slit angle 0 - 180 degrees adjustable
4. Decentering of slit image +4 to -4 horizontal
5. Diaphragm sizes 0.2 - 14mm
6. Filters cobalt blue, red-free, neutral, UV protection
7. Binocular microscope with standard objective and eyepieces
8. 5x to 40x magnification in steps with drum rotation
9. 6 to 40 mm field of view
10. Light spot diameter 0.6mm, 1mm,2mm,5mm,10mm,14mm
11. Movement base movement (x, y, z), adequate chin rest movement
12. Should be supplied with Motorized imported table for slit lamp from the same manufacturer, Applanation tonometer, Beam splitter, Slit lamp camera
13. Product should be a reputed brand which is widely in use.

**Required accessories and consumables:**

1. Light source halogen lamps 5 Nos

**Standards and Power Requirements:**

1. USFDA, CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

**Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.



**CATEGORY 5**  
**OPHTHAL ACCESSORIES**

**REQ. QUANTITY**

**i. Jackson cross-cylinder**

**01 Nos**

**Description:**

1. The cross-cylinder is a sphere cylindrical lens in which the power of the cylinder is twice the power of the sphere and the opposite sign.
2. Product: Cross Cylinder.
3. Material: Alloy and glass.
4. Color: Silver.
5. Overall length: Universal or standard size
6. Lens diameter: Universal or standard size
7. Quantity: 2 pieces (0.25 and 0.50)
8. 1 JCC cross-cylinder piece --0.25,1 piece -0.50 JCC cross cylinder
9. The lens is mounted on a handle which is placed at 45 to the axes of the cylinders Number of Jackson Cross Cylinders 2

**ii. Loose prism set with magnetic handle**

**01 unit**

**Description:**

1. These loose prism sets include magnetically attachable handles that permit easier and less cumbersome counter-top storage, transport, and use than devices with permanently attached handles.
2. The magnetically attachable handles are fast and simple to attach and detach. Strong rare-earth magnets hold the devices firmly on the handles yet are easy to remove.
3. These high-quality prisms are used to measure the deviation in strabismus.
4. It is important to conduct polarized testing through prisms that cause minor interference with polarization.
5. **16 Piece Prism Set includes:** 1/2, 1, 2, 4, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45, and 50 diopters plus Red Lens. Each measure 37 mm square.
6. **22 Piece Prism Set includes:** 1/2,1,2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17, 18, 20, 25,30, 35, 40, 45, and 50 diopters plus Red Lens. Each measure 37 mm square.
7. Both sets must be packed in a foam-lined hard plastic case for added protection



**iii. 90D lenses**

**01 nos**

**Description:**

1. Patented biconvex lens design with double aspheric glass optics provide superior depth of focus/stereopsis and minimize distortion to provide clear views across the entire lens
2. Original 90 diopter lens that started the slit lamp fundus exam revolution: Outstanding general diagnostic lens, even though small pupils. A small diameter ring is ideal for dynamic funduscopy
3. Proprietary Anti-Reflective (A/R) coating minimizes glares and reflections during fundus exam
4. Field of View: 74°/89°
5. Image Magnification: 76 or higher
6. Laser Spot: 1.32x
7. Working Distance approximately 7mm or higher

**iv. Ophthalmic Trial Lens Set**

**01 unit**

**Description:**

1. Description of Function: A box containing a set of lenses of different powers used to detect errors of refraction. Technical Specifications
2. Wooden Case
3. Spheres Lenses with Handle, Power 0.12 to 20.00 with Steps both concave and convex
4. Cylinders Lenses without Handle Powers 0.12 to 6.00 with steps both concave and convex
5. Prisms 0.50 to 12
6. Adjustable trial Frame
7. Red and Green Glass, Pin Hole, Maddox rod, synoptic slit.



## **CATEGORY 6**

## **REQ. QUANTITY**

### **DENTAL CHAIR UNIT**

01 Nos

#### **Description: DENTAL CHAIR FEATURES AND REQUIREMENTS**

1. Should be supplied with two numbers of high-speed handpieces
2. Should be supplied with two numbers of low-speed handpieces
3. Should have high-speed handpiece tubing with connector
4. Should have low-speed handpiece tubing with connector
5. It should have a 3-way syringe (cold and hot)
6. It should have an adjustable headrest
7. It should have a Double armrest
8. It should have a down tray with touch control with memory positions
9. It should have an autoclavable silicone pad; the maximum bearing temperature is 135-degrees
10. It should have a position for the handpiece, syringe, and scaler
11. It should have a Suction and saliva ejector
12. It should have an LED operation lamp with a sensor
13. It should have a lamp arm
14. It should have a Built-in model Lcd X-film viewer
15. It should have an Assistant tray with a touch control
16. It should have Water purified system, Water heating system, Water bottle 600ml
17. It should have an Auto water supply and flush cuspidor system
18. It should have a Glass cuspidor with 180-degrees rotation
19. It should be provided multi-function foot pedal, Dentist stool, PU cushion
20. It should have an air compressor and vacuum system.
21. Compatible with central air compressor and vacuum system with inlets and outlets.
22. Manufacturer's standard warranty with documents should be available.
23. Operators' manual and Service manual should be provided.

#### **Required accessories and consumables:**

1. Solenoid valve, ABS plastic covers, PVC air and water tubes.

#### **Standards and Power Requirements:**

1. USFDA, CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

#### **Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.



**CATEGORY 7****REQ. QUANTITY****WALL-MOUNTED DIGITAL DENTAL X-RAY UNIT****01 Nos****Description: WALL MOUNTED DIGITAL DENTAL X-RAY UNIT FEATURES AND REQUIREMENTS**

1. Wall mounted, compact, digital, AERB type-approved unit.
2. Intraoral X-ray unit should be based on DC current, tube voltage,
3. Selection: 60-65-70 kV, tube current 6mA/ 8 mA, focal spot 0.7 x 0.7 mm total filtration >2 mm Al, the minimum range of exposure time range —0.02 to 3.2 secs.
4. Manufactured with international Safety standards for radiation leakage, electronic selection of exposure time/radiation according to tooth number.
5. It should be possible to select exposure time manually.
6. Should have audible & visual indication of "x-ray on".
7. Should have an option of a remote hand-held trigger button.
8. X-ray tube head should have swing angulations of at least 290° in the vertical plane and 360 ° continuous rotations in the horizontal plane.
9. X-ray tube head should have angle indication.
10. Should have a counterbalanced arm mechanism.
11. Should be 0.5mm lead equivalent.
12. Should be hook and loop type (Velcro fitting).
13. Heat Dissipation Should maintain nominal Temp and the heat should be disbursed through a cooling mechanism.
14. Manufacturer's standard warranty with documents should be available.
15. Operators' manual and Service manual should be provided.

**Required accessories and consumables:**

1. Lead Apron and thyroid guard. **02 nos**
2. The software for viewing and post-processing the X-ray images should be supplied with Computer System.

**Standards and Power Requirements:**

1. USFDA, CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, **50 Hz**

**Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables and minimum supplies to be stated clearly.





**CATEGORY 8**

**REQ. QUANTITY**

**DENTAL LIGHT CURE UNIT**

**01 Nos**

**Description: DENTAL LIGHT CURE UNIT FEATURES AND REQUIREMENTS**

1. Ultra-quiet, ultra-portable, and ultra-powerful LED dental curing light.
2. Should be Cordless
3. Fan free/micro fan silent operation
4. Multiple setting light timer.
5. The LED Tip Should be freely adjustable, rotating 360, for easy access to the restoration site.
6. Should have Built-In Radiometer
7. Should be slim and not a robust design, so it comfortably sits in the operator's hand.
8. The light shall be instant ON, no wait, no warmup time.
9. Light source: Ultra high-intensity light-emitting diode (LED) 390-510 nm-wavelength
10. Constant optical power output. Light intensity will not drop when low battery.
11. Usage for Teeth Composite Cure
12. Constant light output
13. Lighting Mode should include Pulsing mode, gradually mode, Full power.
14. Operators' manual required.
15. Manufacturer's standard warranty with documents should be available.

**Required accessories and consumables:**

1. Eye Protection Shields should be included. **03 nos**

**Standards and Power Requirements:**

1. USFDA, or CE and or ISO certifications or relevant standards certification.
2. Power requirement: 220-240V, 50 Hz

**Additional Remarks or Requirements:**

1. Complete product details to be enclosed with the original brochure or catalogue (Soft or hard copy).
2. Details of the standard accessories, additional accessories, optional items, consumables, and minimum supplies to be stated clearly.

