S.No.	Department Name	Equipment Name
1	MAI (Pathology)	Semi Auto Analyzer
2	Anaesthesia	Mechanical Ventilator adult
3	Anatomy	Bone Box
4	Anesthesia	Adult Dummy
5	Anesthesia	Neonate Dummy
6	Anesthesia	Paediatric Dummy
7	Anesthesia	CPR Full Body Manikin Adult
8	Anesthesia	CPR Full Body Manikin Pediatric
9	Biochemistry	Constant temperature water bath
10	Eye	Phacoemulsification Machine
11	JK CANCER, KANPUR	Fully Autoanalyzer
12	Obs & Gyhne	NST Machine/CTG/Fetal Monitor
13		Laproscopic Operative Set for Histactomy
14	Obs & Gyne.	OT Table Mechanical
15	Opthalmology	Applanation Tonometer
16	Opthalmology	Autorefrectometer
17	Opthalmology	Indirect Opthalmoscope (Self Aluminated)
18	Opthalmology	Keratometer
19	Opthalmology	Perimeter/Automated Field Analyser
20	Opthalmology	Retenoscope
21	Opthalmology	tonopen
22	Orthopaedics	Electrical drill and reamer set

S.No.	Department Name	Equipment Name
23	Orthopedics	Arthroscope
24	Orthopedics	Battery operated drill with all cutting attachments
25	Orthopedics	External fixator
26	Para Medical	Mobile X-ray Machine 100 M.A
27	Pathology	5 Header Microscope
28	Pathology	Haemotalogy Analyser 3 part
29	Pathology	Hormonal Analyzer
30	Pathology	Urine Analyzer
31	Pathology /Biochemistry	Paper Electrophoresis Apparatus (Horizontal)
32	Pediatrics	Baby Warmer
33	Pharmacology	HPCL
34	Pharmacology	Plethysmograph assorted
35	Pharmacology	Centrifuge 5000 RPM
36	Psychiatry	a. Project Tests
37	Psychiatry	b. Intelligance Test
38	Psychiatry	Biofeed-back instruments (sets)
39	Psychiatry	c. PersonalityTest
40	Psychiatry	d. Neuro PsychologyTest

S.No.	Department Name	Equipment Name
41	Psychiatry	
42	Psychiatry	HDtdcs Machine
43	Psychiatry	Psychological Test
44	Surgery	Pedestal side light (for emergency use) double dome LED
45	TB & Chest	Pulmonary function Test (PFT) machine
46	Trauma Centre/OT/Surgery	Resucitation kits
47	Microbiology	PCR THERMO CYCLER
48	Pulmonary Medicine	Spirometry DLCO and Lungs volume measuring device
49	Orthopedics	Pneumatic Torniquate
50	Psychiatry	ECT Machine
51	Trauma Centre	Semi fowler bed with mettress
52	Surgery	Harmonic / Ultrasonic Scalpel
53		Fiber optic Bronchoscope
54		Entropion set, eviscreation, enucleation Set
55		Cataract set
56		Retractor set
57		DCR set
58		LSCS set
59		LMA set
60		Tracheostomy Set
61		Flexible Upper GI Endoscope
62		Colnoscope

S.No.	Department Name	Equipment Name
63		Endoscopic Trolley
64		High Definition LCD Monitor
65		Light Source Xenon 300 W
66		Video Processor
67		Thoracoscope
68		Intubation set with Endotracheal Tube
69		Non invasive Mechanical Ventilator
70		Samplers (autopipettes)
71		Uroflowmetry
72		ENT Examination Chair
73		A-B scan
74		Dental Chair
75		Battery Operated Drilling / Cutting & Reaming System
76		Laproscopic surgery Hand Instruments
77		Pneumatically Operated DRILL
78		Duodenoscope
79	Psychiatry	HDtdcs Machine
80		Drum Set
81		Proctoscope
82		Snellen Chart/Snellen drum with or without remote control
83		Bjerrum Screen
84		Colour Vision

S.No.	Department Name	Equipment Name
85		Near vision chart with different language
86		Synoptophore
87		Diplopia goggles
88		Goniscope
89		Placido disc
90		Prism bar
91		Schoutz tonometer
92		Nasal speculum
93		Tougue depressor
94		Laryngeal Mirrors
95		Nasopharyngeal mirror
96		aural speculum
97		Siegles speculum
98		Tuning Fork (512Hz)
99		Bayonet Forceps
100		Jobson Horn Probe
101		Bulls lamp
102		Head lamp
103		Otosxope
104		Speculams and retractors
105		MR syringes
106		Height scale
107		Hysterosalphigogram Canula
108		Urinometer
109		Thermometer 0-250 degree C
110		Thermometer 0-110 degree C
111		Cork Borer set
112		Chromatographic Chamber

S.No.	Department Name	Equipment Name
113		Desicators Large size
114		Desicators Small size
115		Tools for small workshop for glass
116		TUR Set

3	PGI/MM/PATHO/6-	**Technical Specification of Semi Auto Analyser** Semi Auto analyzer required for Routine Chemistries for Biochemistry **Measurement Procedures:** End point with or without Reagent Blank Kinetic with Linearity Check Kinetic with Linearity Check sample slope Blank Two Point with or without Reagent Blank. Biochromatic End point, with or without Reagent Blank End point with sample Blank and with or without Reagent Blank Analyzer must be fully open system, having as many as 75 Programmable parameters displaying on board. For kinetic graph be available on screen and also on printer. In Kinetics, it takes two reading per second and automatic Zero Setting. Photometric range -0.1 to 2.3 abs; Wavelength must cover 340 nm to 650 nm with six standard filters and Additional six Free Position for optional filters. Wavelength selection by IFL filters Maximum reagent consumption should not exceed 500 µl Metal with Quartz window Cross Type flow cell with Volume not exceeding 32 µl Calibration Mode: Factor, one point, Two point & Multi Point Automatic on one standard linear mode Automatic on up to 10 standard Non Linear mode Fixed Flow cell temperature 37°C by means of Peltier Element Quality control record of at least last 30 controls measurement with on screen Levey-Jennings Plot Two controls per test can be programmed Facility to attach external printer All test Results must be available on screen Instrument must have US FDA certified PS 2 Type port for External Keyboard is must apart from inbuilt alpha Numeric Keyboard Real Time Clock 24 Hour System High contrast Graphical LCD display.	1

SPECIFICATION FOR MECHANICAL VENTILATOR

- Advanced technology time-cycled, volume-constant, pressure-controlled ventilator for use in intensive care suitable for ventilating all categories of patients from pediatric to adults.

- Ventilator should be supplied with inbuilt air source or external medical grade compressor based. If external compressor based, compressor should be US FDA approved and of the same make as that of ventilator manufacturer.
- The Ventilator should be US FDA and European CE approved. The bidder should be ISO 9001 certified.
- Should be suitable for use during transportation within the hospital on imported trolley of same make as that of the ventilator.
- Inbuilt Screen size should be minimum 12" color touch screen with possibility of screen configuration as per user preference.
- Should have the following modes of ventilation:
- Volume control – VC CMV
- Assist control – VC AC
- Pressure control PCV + or PC SIMV+
- CPAP with Pressure Support
- SIMV (Volume Control) with Pressure support
- BIVENTor BIPAP having mandatory facility of setting ventilation rate
- Dual control modes such as PRVC /AutoFlow / PAV for automatic adjustment of pressure and flow within a set PIP with unrestricted spontaneous breathing capability.
- Apnoea backup ventilation mode with adjustable settings for Volume & Frequency.

- NIV Mode in all volume and pressure controlled and spontaneous modes.
- Ventilator should have quick start setup depending on patient body weight or height
- Ventilator should be Upgradable to O2 Therapy.
- Essential automatic weaning mode - MMV / Auto Mode / Intelli ASV single mode for automatic weaning of patient from intubation to extubation combined with or without Pressure Support.
- Should have following settings & features:-

A.Tidal Volume in Volume mode-: 20 to 2000 ml

B.Inspiratory Pressure : 1 – 99 cmH2O

C.CPAP/PEEP /Intermittent PEEP : 0 – 50 cmH2O

D.Inspiratory Rate : 2 – 80 bpm

E.Inspiratory Time: 0.2 – 10 sec

F.Pressure support: 0 – 50 cmH2O above PEEP

G.FiO2 : 21 - 100%

H.I : E Ratio : 1:10 to 10:1

I.Inspiration termination Criteria: 5 – 75% of Peak Inspiratory Flow

J.Flow triggering up to 15 LPM or Pressure Triggering facility

K.Maximum Continuous Flow for press assist/spontaneous breath more than 220 LPM

L.Inbuilt or approved external compressed air source with a guaranteed life of minimum 6 years, bidder to certify in the bid or brochure should mention it.

M.Valve response time less than 5msec to ensure faster response to patient's effort.

N. Should have facility for Manual Breath, Inspiratory Hold, and Expiratory Hold.

O. Should be able to measure Intrinsic PEEP with display of volume trapped.

P. Should have display of weaning parameter like RSBI etc.

Q. Pressure Sigh or Intermittent PEEP with duration of 2 cycles every 3 minutes

- It should display breath to breath measured values for Tidal Volume, Minute Volume, Spontaneous Frequency, FiO2, Peak/Mean Pressures, PEEP, Tplateau, Resistance, Compliance etc.
- It should have three level (Advice/Caution/Warning) ISO alarm management with different audio visual color coded alarms, including corrective help messages on the screen.

- Ventilator should have two stage filtering process for delivering medical grade air. First stage dust filters, second stage microscopic bacteria / virus filter.
- Should have built-in battery back-up for at least 45 minutes for full unit including compressor and ventilator in the event of power failure.
- It should have facility of Oxygen enrichment for endotracheal suction with automatic detection of reconnection and post oxygenation.
- Additional Day/Night screen switch-over and Key lock facility to enhance user preference.
- It should be possible to display at least three types of filled waveforms & loops for each breath. Simultaneous display of minimum 2 waveform along with 2 loops should be possible.
- It should be possible to check readiness for operation of ventilator by a device check comprising of checking the breathing circuit for leakages, for correct functioning of LEDs and alarm tone, power failure, ventilation function etc. Ventilator should able to ventilate the patient in case of failure of flow & Oxygen sensor.
- In case of emergency the machine should have facility of Low Pressure Oxygen, so that ventilation can be provided by low pressure devices such as O2 Concentrator or flow meters in the event of non-availability of high pressure gas line.

- It should have at least 24 hours of graphical and numerical trend display of measured parameters along with Logbook facility to record minimum of 500 records for changed settings, events and alarms in chronological order.
- Ventilator should be upgradable to Mainstream EtCO2 monitoring.
- Screen should display following waveforms:
- Flow – time,
- Pressure – time,
- Volume – time
- Capnograph

and following loops:

- Pressure – volume,
- Flow – volume,
- Flow – pressure
- Volume – CO2
- It should have Scroll/Zoom functions with facility to freeze waveforms & loops and find UIP & LIP and compare at least 2 loops simultaneously.
- Ventilator should have preferable electronic oxygen sensor only for lifetime use/or if chemical should provide 15 Oxygen sensor as a standard scope of supply to last its life time.

- The flow sensor should be of hot wire technology and usable for entire range of patients from Adult to Pediatric for accuracy and reliability .

- Should have two nos. auto cleavable & Reusable Expiration Cassette /valves for complete disinfection capability. For Highly infectious patient, vendor should supply at least 10 disposable expiratory valves/ cassettes. (10 reusable expiration valves in case no disposable valves are possible). Also, a minimum of 20 nos. reusable heated flow sensors should be supplied.
- It should be supplied with high quality reusable Face Masks with gel cushion for face, adjustable cushion pad for nasal bridge and magnetic connectors for quick fastening for non-invasive ventilation of same make.

- A reusable and auto cleavable inspiration synchronized nebulizer should be provided with each ventilator as a standard feature, the particle size of medicament should be less than 5 Microns. Please provide the proof.
- Should have facility for ventilation data transfer & network connection via RS232 port.
- Scope of supply should include :-

- Basic Unit (220 - 240 V) with modular corrosion free imported trolley of same make.
- Flow sensor - 20 Nos. of same Make as of Ventilator
- Breathing Circuit Disposable of same Make as of ventilator- 25 nos
- Reusable auto cleavable expiratory valve- 4 Nos. (10 Nos. disposable valves-preferable.) of same make.
- Oxygen connecting Hose and Air connecting Hose – 1pc each
- US FDA Approved Compressor or inbuilt compressed air source of same make
- Nebulizer of same make
- Hinged arm for rail (Support for patient circuit) – should be imported of same Make
- Test Lung and Instruction Manual

AC-DC adaptor

Oxygen high pressure hose

Test Lung

Instruction Manual

ICU WORKPLACE SOLUTION :- Preferably Made In India.

The Wall Supply Service Units should meet the following criteria.

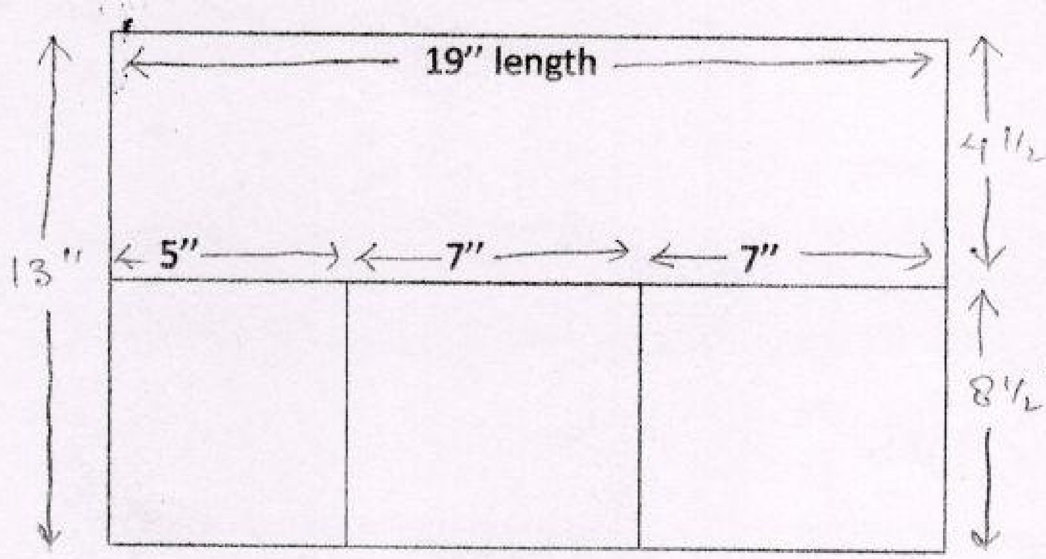
1. Robust design in extruded aluminum profile sections with the thickness of between 1.4 mm to 1.85 mm.
2. Ability to house medical gas terminal units and Electrical Sockets with adequate isolation such that the distance between Oxidized Gas TU to nearest electrical exposed component is 0.2 m
3. The system should consist of a number of aluminum extrusions joined together to form a carcass to suit the particular application.
4. Powder coating thickness: 80 to 100 micron uniform thickness of powder coating. Powder coating tested for 1000 hrs. salt spray test.
5. Product should meet IP 2X ratings
6. ROHS Compliant
7. Anti-corrosive testing
8. All external surfaces should be smooth and no edges on the corners which offers safety

		9. Company should have ISO 9001:2015 and 13485 certified. **Each Bed head unit should have** 1. Length of panel should be minimum 1800mm to accommodate below components. 2. Gas terminal units should be DIN standard with parking and stop flow function, European CE certification should be provided. 3. No. of Gas outlets- Oxygen- 2 nos., Vacuum- 2 nos. 4. Electricals sockets – 8 nos., Data sockets- 2 nos. 5. Medical rail - 600 mm 6. The profile color should be Blue- RAL 5024 7. End cover color should be White- RAL 9016 8. Position of Gas terminal units should be on left side of bed head panel. 9. Position of Electrical/data sockets should be on right side of the bead head panel. 10. Make in India 11. Ventilator & Bed Head Panel should be of same make for better serviceability.		

Technical Specification for bone box

Quantity : 50 boxes

1. Should be made of G.P.sheet (best quality)
2. Dimensions: length 19 inches x width 13 inches x depth 7 ½ inches
3. Should have lid cover (G.P.sheet) with lock system on one side and hinge on other side.
4. Should have longitudinal partition dividing width into 8 ½ inches and 4 ½ inches and further 8 ½ inches partition, the length divided into 3 parts i.e.,5 inches, 7 inches and 7 inches.
5. Should have handle (heavy) to easily lift the box. (one on top & two on sides
6. Should have external pocket of 2 inches x 2 inches for labeling.
7. Engraving on box " ANATOMY DEPTT., SNMC, AGRA "
8. Lock & Key for each box



PRINCIPAL
S. N. Medical College, Agra

TECHNICAL SPECIFICATIONS OF ADULT DUMMY

1. Should be full body adult mannequin
2. Should have inbuilt ECG box and mechanical monitoring instrument that gives instant feedback on ventilation volume, stomach inflation, chest compression depth and wrong hand position ,which should be visible from foot and head end.
3. Should be capable of practicing realistic defibrillation.
4. Should have electronic Carotid pulse
5. Rigidity of the chest is adjustable, Jaw thrust is possible
6. PC-compatible through LAN or Wi-Fi.
7. Should also simulate 26 different ACLS rhythms.
8. Should be supplied with mannequin software and PC with required configuration.

➢ **CPR / Defibrillator :-**

9. The defibrillator / Defibrillator should be latest, lightweight, small size with bright colored display.
10. It should have Biphasic technology, with four waveforms or more to display on minimum 6 inches or more TFT/LCD screen.
11. Should be portable, weight of defibrillator should not be more than 7 Kgs.
12. It should have ability to charge, discharge from Paddles as well as unit.
13. In manual mode the unit should provide energy selection up to 200 joules.
14. Should have fast charging time, charging 200J within 5 seconds or less on mains & battery.
15. The unit should have transcutaneous external pacing with 40 millisecond pulse width.
16. Should have Fixed and Demand mode for External Pacing with pacing rate from 30 to 180 pulse per minute.
17. The unit should have facility for external as well as internal defibrillation.
18. The unit should do self-test daily with facility to give print out of defibrillator testing report.
19. It should have ability to filter out CPR artifacts and allowing person to see organized filtered rhythms without interrupting chest compressions while using AED pads.
20. Should have facility of audio-visual CPR feedback system which synchronizes compression depth and rate of CPR and displays it on defibrillator screen.
21. The CPR feedback system should be as per 2015 guidelines of AHA.
22. The CPR feedback should be able to use as a standalone device for patient rescue and CPR training of staff. It should display the compression results on PC with viewer software.
23. The machine should have the key for easy switch over from adult to child mode in AED.

24. The defibrillator must have optional facility to monitor other vital sign parameters like SpO2 and EtCO2.
25. Battery should be capable of delivering minimum 3 hours of monitoring or capability of delivering 100 shocks once fully charged.
26. Should be upgradeable to lightweight mainstream CO2 sensor which can be use on intubated and non-intubated patients.
27. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)
28. The defibrillator should be European CE approved.
29. Each unit should be supplied with
    a. 3 lead ECG cable – 01 No.
    b. ECG Rolls - 10 nos.
    c. AED/Pacing connection cable – 01 no.
    d. AED/Pacing disposable pads - 05 nos.
    e. Reusable CPR feedback device – 01 No. (if require any disposable item, should supply for 100 patients)

- **Ambu Bag**

30. Should be double layered with built in pressure limitation technology.
31. Should have unique shutter valve.
32. Whole bag should be sterlizable along with reservoir bag
33. Adult ambu bags should be supplied 1- nos.

TECHNICAL SPECIFICATIONS OF Neonate Dummy

1. Should have realistic anatomy & palpable brachial pulse .
2. Should be capable of CPR , mouth to mouth and ambu bag ventilation .
3. Should have easy to implement manual airway obstruction.

➢ **CPR / Defibrillator :-**

4. The defibrillator / Defibrillator should be latest, lightweight, small size with bright colored display.
5. It should have Biphasic technology, with four waveforms or more to display on minimum 6 inches or more TFT/LCD screen.
6. Should be portable, weight of defibrillator should not be more than 7 Kgs.
7. It should have ability to charge, discharge from Paddles as well as unit.
8. In manual mode the unit should provide energy selection up to 200 joules.
9. Should have fast charging time, charging 200J within 5 seconds or less on mains & battery.
10. The unit should have transcutaneous external pacing with 40 millisecond pulse width.
11. Should have Fixed and Demand mode for External Pacing with pacing rate from 30 to 180 pulse per minute.
12. The unit should have facility for external as well as internal defibrillation.
13. The unit should do self-test daily with facility to give print out of defibrillator testing report.
14. It should have ability to filter out CPR artifacts and allowing person to see organized filtered rhythms without interrupting chest compressions while using AED pads.
15. Should have facility of audio-visual CPR feedback system which synchronizes compression depth and rate of CPR and displays it on defibrillator screen.
16. The CPR feedback system should be as per 2015 guidelines of AHA.
17. The CPR feedback should be able to use as a standalone device for patient rescue and CPR training of staff. It should display the compression results on PC with viewer software.
18. The machine should have the key for easy switch over from adult to child mode in AED.
19. Should have configurable AED energy sequence for adult and child patient.
20. The defibrillator must have optional facility to monitor other vital sign parameters like SpO2 and EtCO2.
21. Battery should be capable of delivering minimum 3 hours of monitoring or capability of delivering 100 shocks once fully charged.
22. Should be upgradeable to lightweight mainstream CO2 sensor which can be use on intubated and non-intubated patients.

23. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)
24. The defibrillator should be European CE approved.
25. Each unit should be supplied with
    k. 3 lead ECG cable – 01 No.
    l. ECG Rolls - 10 nos.
    m. AED/Pacing connection cable – 01 no.
    n. AED/Pacing disposable pads - 05 nos.
    o. Reusable CPR feedback device – 01 No. (if require any disposable item, should supply for 100 patients)

➢ **Ambu Bag**

26. Should be double layered with built in pressure limitation technology.
27. Should have unique shutter valve.
28. Whole bag should be sterlizable along with reservoir bag
29. Baby ambu bags should be supplied 1- nos .

TECHNICAL SPECIFICATIONS OF Pediatric Dummy

1. Should be capable of CPR and ventilation .
2. Should be suitable for water rescue
3. Should have correct head tilt which opens the airway.

➢ **CPR / Defibrillator :-**

4. The defibrillator / Defibrillator should be latest, lightweight, small size with bright colored display.
5. It should have Biphasic technology, with four waveforms or more to display on minimum 6 inches or more TFT/LCD screen.
6. Should be portable, weight of defibrillator should not be more than 7 Kgs.
7. It should have ability to charge, discharge from Paddles as well as unit.
8. In manual mode the unit should provide energy selection up to 200 joules.
9. Should have fast charging time, charging 200J within 5 seconds or less on mains & battery.
10. The unit should have transcutaneous external pacing with 40 millisecond pulse width.
11. Should have Fixed and Demand mode for External Pacing with pacing rate from 30 to 180 pulse per minute.
12. The unit should have facility for external as well as internal defibrillation.
13. The unit should do self-test daily with facility to give print out of defibrillator testing report.
14. It should have ability to filter out CPR artifacts and allowing person to see organized filtered rhythms without interrupting chest compressions while using AED pads.
15. Should have facility of audio-visual CPR feedback system which synchronizes compression depth and rate of CPR and displays it on defibrillator screen.
16. The CPR feedback system should be as per 2015 guidelines of AHA.
17. The CPR feedback should be able to use as a standalone device for patient rescue and CPR training of staff. It should display the compression results on PC with viewer software.
18. The machine should have the key for easy switch over from adult to child mode in AED.
19. Should have configurable AED energy sequence for adult and child patient.
20. The defibrillator must have optional facility to monitor other vital sign parameters like SpO2 and EtCO2.
21. Battery should be capable of delivering minimum 3 hours of monitoring or capability of delivering 100 shocks once fully charged.
22. Should be upgradeable to lightweight mainstream CO2 sensor which can be use on intubated and non-intubated patients.

23. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)
24. The defibrillator should be European CE approved.
25. Each unit should be supplied with
    f. 3 lead ECG cable – 01 No.
    g. ECG Rolls - 10 nos.
    h. AED/Pacing connection cable – 01 no.
    i. AED/Pacing disposable pads - 05 nos.
    j. Reusable CPR feedback device – 01 No. (if require any disposable item, should supply for 100 patients)

- **Ambu Bag**

26. Should be double layered with built in pressure limitation technology.
27. Should have unique shutter valve.
28. Whole bag should be sterlizable along with reservoir bag
29. Baby ambu bags should be supplied 1- nos .

TECHNICAL SPECIFICATIONS OF CPR with Mannequin (Adult)

➢ CPR / Defibrillator :-

1. The defibrillator / Defibrillator should be latest, lightweight, small size with bright colored display.
2. It should have Biphasic technology, with four waveforms or more to display on minimum 6 inches or more TFT/LCD screen.
3. Should be portable, weight of defibrillator should not be more than 7 Kgs.
4. It should have ability to charge, discharge from Paddles as well as unit.
5. In manual mode the unit should provide energy selection up to 200 joules.
6. Should have fast charging time, charging 200J within 5 seconds or less on mains & battery.
7. The unit should have transcutaneous external pacing with 40 millisecond pulse width.
8. Should have Fixed and Demand mode for External Pacing with pacing rate from 30 to 180 pulse per minute.
9. The unit should have facility for external as well as internal defibrillation.
10. The unit should do self-test daily with facility to give print out of defibrillator testing report.
11. It should have ability to filter out CPR artifacts and allowing person to see organized filtered rhythms without interrupting chest compressions while using AED pads.
12. Should have facility of audio-visual CPR feedback system which synchronizes compression depth and rate of CPR and displays it on defibrillator screen.
13. The CPR feedback system should be as per 2015 guidelines of AHA.
14. The CPR feedback should be able to use as a standalone device for patient rescue and CPR training of staff. It should display the compression results on PC with viewer software.
15. The machine should have the key for easy switch over from adult to child mode in AED.
16. Should have configurable AED energy sequence for adult and child patient.
17. The defibrillator must have optional facility to monitor other vital sign parameters like SpO2 and EtCO2.
18. Battery should be capable of delivering minimum 3 hours of monitoring or capability of delivering 100 shocks once fully charged.
19. Should be upgradeable to lightweight mainstream CO2 sensor which can be use on intubated and non-intubated patients.
20. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)
21. The defibrillator should be European CE approved.

22. Each unit should be supplied with
    a. 3 lead ECG cable – 01 No.
    b. ECG Rolls - 10 nos.
    c. AED/Pacing connection cable – 01 no.
    d. AED/Pacing disposable pads - 05 nos.
    e. Reusable CPR feedback device – 01 No. (if require any disposable item, should supply for 100 patients)

➢ **Mannequin Adult**

23. Should be full body Adult mannequin
24. Should have inbuilt ECG box and mechanical monitoring instrument that gives instant feedback on ventilation volume, stomach inflation, chest compression depth and wrong hand position ,which should be visible from foot and head end.
25. Should be capable of practicing realistic defibrillation.
26. Should have electronic Carotid pulse
27. Rigidity of the chest is adjustable, Jaw thrust is possible
28. PC-compatible through LAN or Wi-Fi.
29. Should also simulate 26 different ACLS rhythms.
30. Should be supplied with mannequin software and PC with required configuration.

➢ **Ambu Bag**

31. Should be double layered with built in pressure limitation technology.
32. Should have unique shutter valve.
33. Whole bag should be sterlizable along with reservoir bag
34. Adult ambu bags should be supplied 1- nos.

TECHNICAL SPECIFICATIONS OF CPR with Mannequin (Pediatric)

- **CPR / Defibrillator :-**

1. The defibrillator / Defibrillator should be latest, lightweight, small size with bright colored display.
2. It should have Biphasic technology, with four waveforms or more to display on minimum 6 inches or more TFT/LCD screen.
3. Should be portable, weight of defibrillator should not be more than 7 Kgs.
4. It should have ability to charge, discharge from Paddles as well as unit.
5. In manual mode the unit should provide energy selection up to 200 joules.
6. Should have fast charging time, charging 200J within 5 seconds or less on mains & battery.
7. The unit should have transcutaneous external pacing with 40 millisecond pulse width.
8. Should have Fixed and Demand mode for External Pacing with pacing rate from 30 to 180 pulse per minute.
9. The unit should have facility for external as well as internal defibrillation.
10. The unit should do self-test daily with facility to give print out of defibrillator testing report.
11. It should have ability to filter out CPR artifacts and allowing person to see organized filtered rhythms without interrupting chest compressions while using AED pads.
12. Should have facility of audio-visual CPR feedback system which synchronizes compression depth and rate of CPR and displays it on defibrillator screen.
13. The CPR feedback system should be as per 2015 guidelines of AHA.
14. The CPR feedback should be able to use as a standalone device for patient rescue and CPR training of staff. It should display the compression results on PC with viewer software.
15. The machine should have the key for easy switch over from adult to child mode in AED.
16. Should have configurable AED energy sequence for adult and child patient.
17. The defibrillator must have optional facility to monitor other vital sign parameters like SpO2 and EtCO2.
18. Battery should be capable of delivering minimum 3 hours of monitoring or capability of delivering 100 shocks once fully charged.
19. Should be upgradeable to lightweight mainstream CO2 sensor which can be use on intubated and non-intubated patients.
20. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)

20. Should have facility to synchronize sound pitch with EtCO2 value to let user identify the value of EtCO2 without need to look at the defibrillator screen while in emergency situation. (Optional)
21. The defibrillator should be European CE approved.
22. Each unit should be supplied with
    f. 3 lead ECG cable – 01 No.
    g. ECG Rolls - 10 nos.
    h. AED/Pacing connection cable – 01 no.
    i. AED/Pacing disposable pads - 05 nos.
    j. Reusable CPR feedback device – 01 No. (if require any disposable item, should supply for 100 patients)

➢ Training Mannequin Pediatric

1. Should be capable of CPR and ventilation .
2. Should be suitable for water rescue
3. Should have correct head tilt which opens the airway.

➢ Ambu Bag

4. Should be double layered with built in pressure limitation technology.
5. Should have unique shutter valve.
6. Whole bag should be sterlizable along with reservoir bag
7. Baby ambu bags should be supplied 1- nos .

0.5° C to 1°C. Double walled, inside stainless steel and outside mild steel painted in epoxy powder coating. Bath consists of two pilot lamps. Temperature control knob and on/off switch. To work on 220/230 volts A.C. Supplied with or without stirring arrangement, without racks and thermometer. Lid of water bath is made of stainless steel sheet. But with glass windows on both opposite sides for observation. Temperature controlled by mercury contact thermometer with a sensitivity of ±1° C. Suitable for precision laboratory activities requiring constant temperature with high degree of accuracy. Complete with stirrer, workable on 220V AC 50 Hz single phase. Should have ISO & CE certification

Chamber Size in mm & Inch

a) 600 x 450 x 450 mm (24" x 18" x 18")

Item no- 02 Specification of Phaco machine with Autoclavable tubing

- Upgraded, Fully programmable, multi processor control system and portable
- Flat screen, color LCD display with touch screen and tiltable
- Voice feedback for function selection
- Should have the ability to control via footswitch, remote control and front pan
- Should have mapable and programmable footswitch
- Memory of 10 users settings

Ultrasound

- Should have the ability to drive high performance four crystal handpiece, 40 k piezoelectric stim, and

lightweight and autoclavable

- Should have non-invasive optical vacuum pressure sensor.
- Should have micro-coaxial capabilities
- The ultrasound and neosonixhandpiece should be compatible with tips like 30 degrees and 45 degrees, microtip and kelman, flared and aspiration bypass tips
- Facility of ultrasound power control in various sub modes like continuous, p and bi-modal micropulse mode
- Should have a modality of hyper pulses from 0 to 100 pulses/sec with select on time, duty cycle

and burst mode with variable on and off times

- Should have burst setting range from 5 ms to 900 ms
- Should have peristaltic system and the facility to use vacuum level upto 650 aspiration flow rate of

60 cc/ min.

- Should have ability to regulate irrigating pressure by height of I/V pole and c irrigation controlled by

footpedal and on touch panel

- Tubings should be reusable and autoclavable
- Aspiration/handpiece should have both coaxial and bimanual attachments
- Phaco tips should be 30 degrees, 45 degrees and kelman type

47

(2) (2)

Should have the ability to control surgical modes via footswitch, remote control and front panel

Vitrectomy

Should have an ability to drive electric cutter for anterior Vitrectomy with cut rates up to 1500 cuts per minutes

with submodes cut 1/A, 1/A Cut with panel or linear cut control by footpedal

Diathermy

Bipolar coagulation capability, panel or linear power control by foot pedal

Reusable diathermy forceps /autoclavable bipolar cable

Accessories required

1. Phaco Tips

a. 45deg

b. Kelman

2. Phaco Sleeve kit (sleeve and test chamber)

3. Phaco Cassettes/Tubing sets

4. I/A Handpiece

a. Bimanual

b. Coaxial

5. Vitrectomy Cutters

(Dr.Aruti Kr. Sharma) Associate Professor

(Dr.Sanjiv Kr. Gupta) Professor

(Dr.Poonam Kishore) Professor

(Dr.Vinita Singh) Prof. & Head

(4)

64

(11)

Technical Specification of Fully Computerized Biochemistry Analyzer

1	System should be fully Auto mated Random access Bio-Chemistry Analyzer have throughput ~~180~~ 150 photometric tests/hr.
2	Continuous loading of sample.
3	One reagent probe and One separate sample probe with level detection so that no contamination of samples and reagent can be occur, collision protection, Integrated mixing & preheated reagent up to 37°C.
4	Two dedicated syringes for better precision and accuracy.
5	On Board Laundry system with cost effective semi disposable.
6	Lower water usage, preferable 1000 ml/hr continuous operation. Else distillation plant to be provided by bidder
7	Automated reagent management with 32 refrigerated positions and with 30 sample position which can be used for Calibrators, controls, STAT sample, pediatric sample etc
8	Sample volume should be from, 1-30µl per test programmable in the steps of 0.1µl.
9	Should have prozone check for immunology and cut off declaration with automatic serial dilution facility of the parent calibrator.
10	All reagent positions can be assigned as R1, R2, R3.
11	Should be with Integrated PC having touch screen navigation facility.
12	It should have photometric range-0.1 to 3 absorbance & resolution 0.001 Abs.
13	System should be with Quartz-Iodine Lamp.
14	On Board Quality control with L-J plot.
15	Programmable dilution ration ratios 1:5 up to 1:200 in one step increments with 3 possible diluents.
16	System should be European CE & USA FDA approved Model.
17	Up to 15 different controls can be defined, 3 per test.
	For Operational support
•	Sine wave 1 KVA UPS with 4 Hrs battery backup
•	L.I.S. software should give for biochemistry test alongwith sample Bar code and online reporting system and S.M.S alert to patient report is ready.
•	Bidder will provide Service and application support for smooth running and functioning of Lab as per requirement of consignee with the instrument at free of cost. Minor Interior Work for installation of medical equipment will be done by bidder at his own cost.

Dr. Sarita Bhagat

Dr. Rajeev Ranjan (JDCMSD)

Ravi Kumar Dy. Dir. (Elect)

Dr. Vinod Kr. Gupta, Dr. RML Hospital (Lko)

Dr. Manish Raj Kulshrestha, RMLIMS, Lko

TECHNICAL SPECIFICATIONS FOR NST / CTG / FETAL MONITOR

- Should have 12" foldable color TFT-LCD Touch Screen display
- Should be suitable for continuous monitoring of fetal heart rate (Dual) and Uterine Activity, Maternal NIBP, MECG & MSpo2.
- Should display at least 6 waveforms.
- Should have manual as well as touch function for all parameters.
- Should have minimum 12Crystal water proof transducer for clear FHR
- Should have dual channel FHR for twin monitoring facility along with separate traces for each fetus.
- Should have signal overlap verification facility for calculation FHR and distinguish between FHR of twin fetus automatically.
- Should be able to store data continuously for 24 hours
- Should have inbuilt rechargeable lithium –ion battery with battery back up upto 4 hours in continuous mode.
- Should have integrated probe rack for various probes.
- Should have inbuilt real time thermal printer and should use Z-fold thermal paper with speed of 1, 2 & 3 cm per min.
- Should have handle for easy carrying and provision for wall mount.
- Should have audio –visual alarm setting for all parameters.
- Option for review stored data and facility of print out.
- Should have an connectivity with central nursing station with wireless network
- Should Have option of IUP and DECG Function (Quoting company shall perform Demonstration of upgradation parameters during demonstration especially IUP) (optional)
- System must have US FDA Quality certification (please attach the same).
- Machine should give complete analysis report.
- Should supplied complete with

1.	FHR Probe	2No
2.	TOCO Probe	1No
3.	Event Marker	1No
4.	NIBP Cuff Adult	1No
5.	Spo2 Probe	1No
6.	ECG 3 Lead	1No
7.	Belt	3No
8.	Thermal paper (150mm)	2 Rolls
9.	Manual	1 No

Technical Specifications for to High Definition Laparoscopic Opeartive set for Hysteroscopy

The system should be truly Digital HDTV endoscopic video camera. The system should have the maximum Resolution of 1920 X 1080 pixels, progressive scan and the consistent use of 16: 9 formats for Input & Output to guarantee genuine HDTV.

1) **Full HD Video Image Processor**: Should have following specification:

- A full high definition processor should have resolution of 1920x1080 pixels.
- Should have a USB slot so as to take still pictures of Endoscope images.
- Should have provision for adjusting brightness automatically during to & fro of the scope movements.
- Should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions

2) **3 Chip /CMOS Full HD Camera Head** (with ICG or Special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions,

- The camera head should be compatible for ICG HD fluorescence guided Imaging by Near- Infra Red/Optical Contrast Differentiation System **OR** should have special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions,
- The full HD camera head should be of Eye piece type & have resolution of 1920x1080 pixels.
- Should have Digital / Manual focus function which can be varied seamlessly from coarse to fine image.
- Camera Head & coupler should be one piece.
- The camera head should must have integrated (one piece) inbuilt zoom and focus lens/rings to make it fully soak able for sterilization/disinfection.

3) **Powerful LED Light Source**

- The LED Light Source should be with special filter light for observation of capillary vessels and fine patterns in the superficial layer of mucosa for early detection of lesions
- A Powerful **LED(Equivalent to 300 W xenon)**
- It should have facility to offer various visualization modes for surgery and diagnosis by modulating the light spectrum like RED, BLUE, GREEN & VIOLET LED light for recognition of the finest tissue structures and their differentiation.
- Automatically adjust light intensity to achieve ideal illumination.
- LED should have at least 5000Hrs life

4) **26" Full HD Medical Grade Monitor:** Should have following specification:

- 26 inch full HD LCD with LED backlit monitor with high resolution 1920x1080
- Aspect ratio 16:9
- Should have multi -modality display compatibility, including Picture-in-Picture for various image size combinations.
- Should have eco -friendly consumption by low power consumption, various powers saving mode, lightweight and thin body.
- Should have advance Image Multiplier Enhancer to enhance image quality.
- System should offer 2 x DVI-D output, 2 x 3G/HD SDi output
- Should have 2x DVI – D input and 2 x 3G/HD SDi input .
-

5) **Telescope**: Should have following specifications: ***For firm quoting ICG model should quote ICG compatible Telescope**

- 10mm, 0 & 30 degree – 1No each
- Completely distortion free.
- HD Optics for better contrast & color reproduction.
- Large field of view and depth of focus..
- Fully Autoclavable type.

6) **Light Guide Cable**

- It should have High resistance protection against mechanical and thermal stress
- It should have small bending radius for comfortable use
- It should be 3 Meter or more in Length
- Should be ROHS compliant.

7) High Flow CO2 Gas Insufflator unit –

-Should be digital, microprocessor controlled & automatic type
- Large digital display on front panel for status checking
- Powerful Insufflation flow rate of 40 – 45 L/Min required
- Automatic feedback control for any malfunction.
- Smoke evacuation facility compatible with energy sources of same manufacturer
- Need to provide a Pin type CO2 hose plug which can be connected to Pin type CO2 cylinders.

8) **Trolley should be supplied for the system**

- Should have minimum 3 to 4 shelves
- Should have storage for C02 gas bottle holder
- Should be from same Manufacturer
- Trolley should be able to hold monitor with tilt and swivel accordingly.
- Should have anti- static strong wheels

9) Laparoscopic Instrument/accessories :

Should have following specifications :

- Connecting nipple, luer-lock male and X-max free - 3 no.
- Needle acc. to veress, 120 mm - 2 no.
- HF-cable, Unipolar, 3.5 m - 2 no.
- HF-adapter, 4 mm pin with 3 mm slot for instrument connection – 2 no.
- Trocar tube, 5.5 mm with stopcock - 4 no.
- Trocar spike, 5.5 mm, triangular tip - 4 no.
- Trocar tube, 11 mm with stopcock - 4 no.
- Trocar spike, 11 mm, triangular tip - 4 no.
- Reduction tube, 13/11-5 mm - 2 no.
- Handle for Suction/irrigation tube - 1 no.
- Suction/Irrigation tube, 5 mm - 1 no.
- Suction/Irrigation tube, 10 mm - 1 no.
- HF-electrode, Hook Type with suction channel, 5x330 mm - 2 no.
- HF-electrode, Spoon Type with suction channel, 5x330 mm - 1 no.
- Dissecting, grasping forceps, 5X330 mm, Maryland, rotatable - 2 no.
- Grasping forceps, fine toothed, 5X330 mm with ratchet, straight - 2 no.
- Johann Forceps with long jaws - 2 no.
- CroceOlmi forceps for bowel manipulation - 2 no.
- Hook Scissor, 5X330 mm, Rotatable - 1 no.
- Metzenbaum Scissors, 5X330 mm, Rotatable - 2 no.
- Grasping forceps, 10X330 mm, Claw type, Rotatable - 1 no.
- Clip Applicator, 10x330 mm, Rotatable - 1 no.
- Bipolar Grasping forceps, 5X330 mm, Hirsch type - 1 no.
- Bipolar cable - 1 no.
- Self-aligned needle holder - 1 no.
- Straight needle holder - 1 no.
- Fan Retractor, 5 mm - 1 no.
- Babcock Forceps, 5 mm dismantle type - 1 no.

1.All Equipments Should be US FDA/European CE

2. All equipment's should be from the same manufacturer.

3. The principal Company should have their own Service Centre in Delhi/ NCR

4. Comprehensive Warranty of all equipment's(Except Hand instruments) should be of 5 years.

B. Hystoresection set Compatible with Above LAP system

1.Mini Hysteroscopy

- System must be able to be used for either single or continuous flow.
'- The outer diameter of system must not exceed 3mm when assembled for single flow usage.
'- The outer diameter of system must not exceed 4.5mm when assembled for continuous flow usage.
'- Anesthesia is not required during use of the device.
'- The continuous flow system must be able to be used with endo-therapy instruments up to 5Fr.
'- System should be autoclavable.
'- Durability of the scope must be given by optical fibers.
'- Telescope direction of view must be either for 0° or 30°.
'- Dedicated protection tube for telescope available.
'- The device must be CE certified and FDA approved."

2.Rigid Diagnostic Hysteroscopy

"- System must be able to be used either for single or continuous flow.
'- The outer diameter of system must not exceed 4mm when assembled for single flow usage.
'- The outer diameter of system must not exceed 4.5mm when assembled for continuous flow usage.
'- The continuous flow system must have dual-channel sheath design to be as compact as possible.
'- Should be autoclavable.
'- Telescope direction of view must be either 0° or 30°.
'- 30° Telescope must be wide angle.
'- Material of telescope lenses should be glass.
'- Dedicated protection tube for telescope available.
'- The device must be CE certified and FDA approved."

3.Rigid Therapeutic Hysteroscope

- System must be able to be used with continuous flow.
'- The outer diameter of system must not exceed 6.5mm when combined with 4mm telescope.
'- The system must be able to be used with endo-therapy instruments up to 5Fr.
'- Telescope direction of view must be either 0° or 30°.
'- 30° telescope must be wide angle.
'- Dedicated instrument tray for 4mm telescope available.
'- The outer diameter of system must not exceed 5.5mm when combined with 3mm telescope.
'- Dedicated protection tube for 3mm telescope available.
'- The 5.5mm system should be suitable to be used with Gynecare 5 Fr. Versapoint products.
'- The 5.5mm system should be suitable to place a hysteroscopic sterilization device (e.g. Essure).
'- System should be autoclavable.
'- System must include semiflexible hand-instruments for grasping, cutting and biopsy purposes.
'- Hand instruments must be 5Fr. in diameter.
'- Hand instruments must not exceed 360mm in length.
'- The device must be CE certified and FDA approved."

4.TCR Monopolar

- System must be able to be used with continuous flow.
'- The outer diameter must not exceed 8.5mm.
'- The system must be rotatable at the outer sheath.
'- The working length must not exceed 194mm.
'- Telescope outer diameter must be 4mm.
'- Telescope direction of view must be 12°.
'- Dedicated instrument tray for 4mm telescope available.
'- System should be autoclavable.

'- System must work with Anti-Blocking-System to ensure continuous flow and to prevent tissue sticking to the cervical canal.-(Proprietary)
'- Assembling and disassembling must be due to a logical locking system.
'- Inner sheath must be with ceramic beak.
'- Working element must be available either for passive or active use.
'- Working element must be dedicated for use in monopolar energy.
'- HF-resection electrodes must be dedicated for use in monopolar energy.
'- HF-resection electrodes must be re-usable.
'- Tip of HF-resection electrode must be a loop with 0.35mm wire thickness dedicated for use with 12° telescope.
'- Tip of HF-resection electrode must be an angled loop with 0.2mm wire thickness dedicated for use with 12° telescope.
'- Tip of HF-resection electrode must be a roller dedicated for use with 12° telescope.
'- Tip of HF-resection electrode must be a 45°-needle dedicated for use with 12° telescope.
'- The device must be CE certified and FDA approved."

5.TCRiS (Bipolar)

- System must be able to be used with continuous flow.
'- The outer diameter must not exceed 8.5mm.
'- The system must be rotatable at the outer sheath.
'- The working length must not exceed 194mm.
'- Telescope outer diameter must be 4mm.
'- Telescope direction of view must be 12°.
'- Dedicated instrument tray for 4mm telescope available.
'- System should be autoclavable.
'- System must work with Anti-Blocking-System to ensure continuous flow and to prevent tissue sticking to the cervical canal. (Proprietary)
'- Assembling and disassembling must be due to a logical locking system.
'- Inner sheath must be with ceramic beak.
'- Working element must be available either for passive or active use.
'- Working element must be dedicated for use in monopolar energy.
'- HF-resection electrodes must be dedicated for use in bipolar energy under saline.
'- Tip of HF-resection electrode must be a loop dedicated for use with 12° telescope and single use.
'- Tip of HF-resection electrode must be a roller dedicated for use with 12° telescope and re-usable.
'- Tip of HF-resection electrode must be a 45°-needle dedicated for use with 12° telescope and re-usable.
'- Tip of HF-resection electrode must be a button for plasma vaporisation dedicated for use in 12°telescope and single use.
'- HF-cable should have instrument recognition when connected to HF unit.
'- The devices must be CE certified and FDA approved"

6.HysteroFlow II

- The pump must be indicated to provide liquid distension of the uterus during diagnostic and operative hysteroscopy. The volume differential between the irrigation fluid flowing into and out of the uterus must be monitored.
'- The pump must be electronically pressure controled.
'- The working principle of the pump must be a peristaltic roller-pump.
'- Nominal pressure must be able to preset between 35 and 150mmHg.
'- Nominal flow must be able to preset between 30 and 500 ml/min.
'- Intrauterine pressure must be maintained permanently and displayed as well as the pre-set pressure and flow-rate.
'- For precise intrauterine pressure measurement the pump must have an automatic instrument recognition.
'- Intrauterine pressure must be displayed as well by large numeric as symbolic.
'- Overpressure must be displayed visually and by acoustic and rapid deficit alarm.

'- The graphic user interface of the pump should be a touchscreen with a text-based user menu which is self-explaining.
'- Device should operate with a completely non-contact pressure measurement of the irrigation-medium due to closed system.
'- Patient safety must be given by accurate pressure monitoring and several alarms.
'- Tubing set must be able to set-up two irrigation bags and must have either inflow and outflow tubing or inflow tubing only.
'- Tubing set must have the ability to be recognised by the system due to RFID coding.
'- Tubing set for inflow only must be re-usable and must not exceed 20 autoclave cycles.
'- Tubing set coming with inflow and outflow tubing should be DEHP-free and single-use.
'- The device must have the option to be connected to a balancing device.
'- The device must be CE certified and FDA approved."

7.HysteroBalance II

- The balancing device must have the ability to place a dedicated pump.
'- The balancing device must have two weighing cells which are able to measure inflow and outflow.
'- The balancing device must be able to carry to a maximum of four bags of irrigation fluid up to 5-liter as well as a maximum of five 3-liter containers.
'- 2-liter and 3-liter container of company Medela, Serres and Abbott as well as 3-liter container of company Bemis must fit to the device without additional adapters.

1.All Equipments Should be US FDA/European CE

2. All equipment's should be from the same manufacturer.

3. The principal Company should have their own Service Centre in Delhi/ NCR

4. Comprehensive Warranty of all equipment's(Except Hand instruments) should be of 5 years.

Electro – Hydraulic Operating Table

- OT Table should be Four section RADIO – TRANSLUCENT Table Top with Built in TABLE TOP SLIDING Mechanism to Facilitate C-arm.
- Operating Positions : Height Adjustment, LONGITUDINAL SLIDE, Lateral Tilt Trendelenburg, Reverse Trendelenburg and Back Section should be precisely and smoothly controlled by REMOTE SWITCH with feather touch controls through ELECTRO-HYDRAULIC SYSTEM
- The remote should be ergonomically designed to have an easy and better grip with spiral cable and should have LED backlit screen with symbolic position figures making it convenient to use even in the dark
- Should store up to two preset table top position in its memory which can be recalled anytime by simply pressing M1 or M2 button on the remote
- Should have Zero position facility i.e. by pressing the single button OT Table should come to normal position
- Should have patient reverse orientation mode when head and leg section are interchanged
- Remote control should have function of locking operating positions to prevent accidental movement of that position during surgery
- Head & Foot Section should be manually operated by the means of Ratchet System
- Stainless steel Covered Base and Column Covers for easy cleaning and hygiene
- Complete with Stainless steel side-Rails, Clamps and Standard Accessories

Table Top Length	:	1900 mm
Table Top Width	:	500 mm
Height	:	750 - 1000 mm
Trendeleberg, Reverse Trendeleberg	:	± 25°
Lateral Tilt	:	± 15°
Back Section	:	+ 80° ~ - 20° down
Leg Section	:	- 90°
Head Section	:	+ 45° ~ - 90° down
Table Top Slide	:	200 mm Variation ± 10%

नेत्र विभाग/26/2/18/88

SPECIFICATION OF APPLANATION TONOMETER

1. Should be Applanation type.
2. Should be based on Goldmann Tonometry principle.
3. Should have a measuring range from 0 to 78 mmHg in steps of 2 mmHg.
4. Should have an accuracy of $\pm$ 0.5 mmHg.
5. Should be supplied with calibration Bar, Prism and tonometer mount base to fix with optics.
6. Should be compatible with all models of slit lamps.
7. Should supply 1 no spare prism
8. Controls should be visible and clearly defined.
9. Lebels and markings should be clear and visible.

डा. हिमांशु कुमार यादव
विभागाध्यक्ष
नेत्र विभाग
एस. एन. मेडिकल कालेज, आगरा

PRINCIPAL
S. N. Medical College, Agra

TECHNICAL SPECIFICATION OF AUTOREFRACTOMETER

Measurable Range
Sphere - 30.00D to +25.00D (VD=12 mm)
(0.01/ 0.12 / 0.25D increments)
Cylinder - 0D to ± 12.00D
(0.01/ 0.12 / 0.25D increments)
Axis 0 Deg. to 180 Deg.
(1 Deg. / 5 Deg. Increments)
Minimum Measurable pupil diameter -2 mm
PD measurement rage --30 to 85 mm (1mm increments)
(Near point PD: 28 to 80 mm at WD=40 cm)
Pupil size measurement range - 1.0 to 10.0mm
(0.1mm increments)
Auto tracking & Auto Shooting- Y direction, Auto shooting
Chart-Scenery chart
Display-Tiltable 6.5 inch color LCD
Printer -Built-in-thermal type line printer
(Easy loading and auto cutter)
Interface -RS-232C (In / OUT)
LAN, USB,
Eye care card system / Card is optional
Power supply -AC100 – 240 V ± 10%
50 / 60 Hz
Power Consumption -100 VA
Weight -20 kg

Dept. of Ophthalmology
Medical College
Allahabad

TECHNICAL SPECIFICATION OF INDIRECT OPHTHALMOSCOPE (SELF ILUMINATED)

- White light uniform,well spread illumination (LED)
- Full pupil feature
- Stereo optical system
- Cobalt blue and green filters
- Interpupilary distance adjustable from 50-75mm
- Illumination area (1.5mt):80mm
- With rechargeable battery
- Power supply I/P: 100V -240V ,50Hz/60Hz
- O/P: 5.3V DC, 1watt LED

Head
Dept. of Ophthalmology
M.L.N. Medical College
Allahabad

(18)

Keratometer

Screen	Bright, 8.5 color touch-screen color display
User's Convenience	Designed for ease of use and operability
Screen display	Average Values (Upto 10 Readings)
Illumination	Back Light Illumination dim for pediatric accommodation

Rotary Prism Technology for Highly accurate Keratometric and Refractive Measurements

Joystick for smooth Up-Down & Left –Right movements

Objective Refractometer Mode

Sphere Range	-25D to +22D (0.12D/0.25D steps)*
Cylinder Range	0D to ±10D (0.12D/0.25D steps)*
Axis Range	0° to 180° (1°/ 5° steps)
Minimum Measurable Pupil Diameter	□2 mm

Corneal Curvature Mode

Corneal Curvature Radius	5.00 to 10.00mm (0.01mm step)
Corneal Refraction	67.50D to 33.75D (0.12D/0.25D steps) (where, corneal refractive power =1.3375)
Corneal Astigmatism	0D to ±10D (0.12D/0.25D steps)
Corneal Astigmatism Axial Angle	0° to 180° (1°/ 5°steps)
PD Measurement Range	20mm to 85mm (0.5 mm step)
Input/ Output	USB (input) /RS-232C (output) / LAN (output)
Printer	Thermal built in Printer
Dimensions	317-341mm (W) × 521-538mm (D) × 447-477 mm (H)
Weight	15kg
Power Supply	100-240V AC, 50-60Hz, 30-70VA

Motorised Instrument Table Will be Supplied with equipment

TECHNICAL SPECIFICATIONS OF PERIMETER

Instrument Features:	
➢ Peripheral Range 90°	
➢ Static Perimetry, DS, NS	
➢ Fixation Control & Pupil Measure	
➢ Head position recognition	
➢ Ethernet connection	
➢ Stimulus Sizes 111, V	
➢ Stimulus Sizes 1 –V	
➢ Expert Opinion (Easterman test)	
➢ Kinetic Disability test	
➢ Automated Lens Holder	
➢ Lens Distance Control	
➢ EyeSuite Perimetry Lite	
➢ EyeSuite Perimetry Advanced	
➢ EyeSuite Perimetry Pro	
➢ TOP Fast Strategy (2:30 min test)	
➢ Custom Test	
➢ Automated Eye Tracking (AET)	
➢ Flicker Perimetry	
➢ Blue Yellow Perimetry (SWAP)	
➢ Red Stimulus (color perimetry)	
➢ Manual Goldmann Kinetic	
➢ Automated Goldmann Kinetic	
Electrical & Mechanical Specifications	
Power Requirements	100-120VAC/220-240VAC 50/60 Hz
Operating Temperature	+ 15° C … + 40° C
Light Source life span	>20'000 hrs for stimulus, background and fixation
Conformity	CE:93/42/EEC, 89/336/EEC, conformity module A CSA C & US
Measures (W x L x H)	648mm x 519mm x 796mm
Weight	25 Kg

SPECIFICATION OF STREAK RETINOSCOPE

1. Should have an external focusing sleeve which is easy to grip and manipulate.
2. Should have crossed-linear polarizing filter.
3. Should allow one-operation for streak focus and 360° streak rotation.
4. Should be interchangeable to plane mirror and concave mirror mode by sleeve movement.
5. Should use halogen/Xenon streak lamp.
6. Should have 100% dust proof housing and multi-coated optics.
7. Should have detachable brow rest for spectacle wearer.
8. Should have battery/rechargeable battery operated.
9. Should have a carrying case.
10. Should be supplied with the following accessories.
    - Bulb — 5 nos.
    - Bulb holder
    - Bulb cover

डा. हिमांशु कुमार यादव
विभागाध्यक्ष
नेत्र विभाग
एस. एन. मेडिकल कॉलेज, आगरा

PRINCIPAL
S. N. Medical College, Agra

TECHNICAL SPECIFICATION OF TONOPEN (DIGITAL TONOMETER)

- Should have Micro strain Gauge technology and 1.0 mm diameter transducer tip
- Should have Measurement range- 5-55mmHg
- Should have Power source- By Battery
- Should have IOP measurement is displayed on two large, easy-to-read LCD screen
- Should have The LCD screen are positioned on the either side so both left and right handed user can visualize the measurement
- Should have over molded grip zone help stabilize in virtually all hand sizes.

Technical Specifications of BATTERY OPERATED DRILLING /CUTTING & REAMING SYSTEM

1. Oscillating Saw

Working Voltage	: 14.4V
Output Power	: >90W
No-Load Frequency	: >6000time/min
No Load Noise	: < 90db
Speed	: 22000
Torque	: 2.5Nm
Autoclavable	: Yes
Function	: Single
Blades	: Different Size Total 10 Nos

2. Dual Function Drill (Drilling & Reaming)

Working Voltage	: 14.4V
Output Power	: >90W
No-Load Frequency	: >300r/m
No Load Noise	: < 75db
Speed	: 1000 RPM
Torque	: 2.0 Nm
Autoclavable	: Yes
Attachments	: S.S.Drill Chuck A.O Reamer Attachment Screw Drivers

Battery : Qty 4 Nos

Type	: NiMh
Voltage	: 14.4V
Autoclavable	: Cannot be autoclaved.
Charging Time	: 2 to 3hrs
Working Time	: 40mins
Guarantee	: 3 months or 100 surgeries whichever is earlier)

Charger

Input Voltage	:AC 220V,50Hz
Charging Slot	: Single
Size	: Compact