SPECIFICATIONS

1. PULSE OXIMETER

- High-resolution backlit LCD display of minimum 8" (diagonally) screen size
- Displays SpO2 values, PR, plethysmograph along with perfusion level indicator
- Online graphical trend.
- SpO2 Range 0-100%
- Alarm Limits: SpO2 50-95% (Low), 55-100 (High)
- Adult / paediatric / neonatal applications.
- 24hr . graphical trend for SpO2 & Pulse rate.
- Must have Graded & Colour coded alarms (2 stage)
- Alarm recall facility to view minimum last 15 alarms should be possible
- Can be used as transport and ambulatory monitor
- Mains and battery operation [In-built battery] for min 2 hrs.
- External battery jack (12V) for car battery—Transport application

Should have ECG and NIBP display
Conforming to International standards

Should be supplied with:
Reusable SpO2 finger sensor, ECG Cables and NIBP accessories.
CE / FDA CERTIFIED

2. PEREPHERAL NERVE STIMULATOR

1. Should be portable and compact with batery back up.
2. Should have single switch DBS, TOF, Tetanic and PTC.
3. Should give variable intensity of simulation.
4. Should have spares such as Thermal paper electrode fixatorsand adhesives.
5. Should have built in printer.
6. Should have optical axilographs and display screen.

3. Electronic balance

Weighing capacity-320g, minimum display- 0.1mg, linearity- +/- 0.2mg, power supply- 100 V AC-15% to 10%, 50/60Hz

4. Low Weighing Electronic Balance

- - - -
- - - -

5. ACT Machine (Activated Clotting Timer)

- - - -
- - - -

6. Heamodynamic Monitor

ECG AND HEMODYNAMIC MONITORS

1. The monitors should have 12 inch TFT /LCD vibgyor medical grade color screen flat panel.
2. Microprocessor based technology.
3. The monitor should have key pad for entering alpha numeric patient data.
4. The monitor should be up gradable at customer site.
5. The monitor should have inbuilt software package for hemodynamic calculations, pulmonary capillary wedge pressure (optional) for 6 nos.
6. Trending of parameters monitored for minimum of 24 hours with expanding features.
7. Data transfer facility.
8. Should have talk each other features.
9. The wave forms and numeric on the display should align against each other for easy viewing.
10. The ECG should provide for viewing at least 3 ECG channels simultaneously.
11. The recorder should be of the thermal array type and provide for online recording of any 2 wave forms simultaneously and all numeric, patient names etc. At the central station.
12. All modules must have color coded connectors for quick and easy identification.
13. All monitors should be capable of monitoring at least 2 pressures at a time.
14. All modules should be compatible with all monitors.
15. Should meet international safety features.
16. Defibrillation protection.
17. Operating voltage: 200-240 AC with 50- 60 H z.
18. Rechargeable maintenance free battery back up of at least 30 min.
19. Capability of memory staying on power off.
20. Monitors should have capabilities of adult, pediatric and infant application.
21. ethenet based central station with 12 channels (to monitor 12 patients) for display of one each wave form and patient parameter like HR,NIBP,SPO_2 with expanding features for a selectable bed.

7. TEMPORARY PACEMAKERS

1. Should be capable of pacing in demand or asynchronous mode.
2. Should be capable of pacing at rates of 30-180 ppm that is user selectable. Should also have the capability of performing high rate pacing up to 450ppm.
3. Should have the capability to deliver 0.120ma output which should be user selectable with 1.5/2 ms pulse width.
4. The pacemaker sensitivity should be user selectable from 0.5- 20 mv.
5. Should use easily available standard 9-volt alkaline battery.
6. Should indicate pacing, sensing and battery status.
7. Should be protected against defibrillator shocks.

8. Should continue to function for at least 10 seconds during battery change.
9. Should be lightweight and small.
10. The controls should have easily visible transparent protection cover.
11. Patient extension cable with 3 patient bipolar endocardial leads.

8. STRESS SYSTEM T M T MACHINE

COMPUTERIZED TMT EQUIPMENT

1. State of the art, latest model, high end equipment must be quoted.
2. System should simultaneously acquire and analyze at least 15 ECG leads.
3. System should have digital acquisition preferably in the form of acquisition module.
4. Facility for CRT display processed, signal averaged distortion free ECG signals updated every 5 beats with at least 15 channels and at least 3 rhythm channels.
5. Medial display of 1 or 2 leads updated every 5 beats with maximum ST deviation with pretest and updated ECG.
6. Facility to display all the 15 channels simultaneously with pretest and updated ECG with ECG analysis.
7. System should have facility for storage of all ECG data in hard disk for retrieval, replay and transmission.
8. Should have facility for recording 15 lead resting ECG , selectable minute by minute ECG's ,pre-programmed distortion free exercise ECG's and ECG during recovery and test end with ST segment analysis report.
9. Should have provision of software, driven user programmable exercise protocols and/or standard protocols.
10. System should print comprehensive minute by minute record of ST segment changes, ST segment trend plot and acceleration of the ST segment.
11. Should have facility for editing of final report.
12. Should have facility for display of 6 channels of rhythm user defined levels.
13. Should have capability for adjusting the isoelectric point, J-point and ST level during any phase of stress test.
14. Should have hard disk memory for storing current patient data including wave forms.
15. In addition the equipment should have floppy disk memory for storing final report including wave forms and for incorporating any future upgrades introduced by the manufacturer.
16. Should have trend facility for HR, ST slope, blood pressure, PVC/min,R wave amplitude ,J point changes ,work load, rate pressure product ,ST/HR slope.
17. Should have ability to reanalyze of St segment of ST measurement points i.e., to set new points and move the median complexes through a new measurement points generating a new final report even after the test is over and stored.
18. System should have dynamic scan facility to display automatically the worse ECG lead.
19. System should have automatic noise free programmable treadmill, which should be manufactured by the same manufacturer run by the system.it should also have manual controls.

20. Automatic arrhythmia detection and documentation.
21. System should be defibrillation protected.
22. Should have facility to store current patient data on floppy disk and facility to retrieve data back and print out.
23. Should have optional bicycle ergometry compatible.
24. Should not be assembled unit.
25. Reports.
26. Certification: UL classification, CSA certification, CE marking concerning counsel directive 93/42/EEC, CB certificate.

9. BLOOD BANK REFRIGIRATOR/CONTROLLED RATE DEEP FREEZER

1. (a) Controlled rate deep freezer
   - Volume 250-350 litre
   - Temperature range upto-196º with controlled temperature rate 1º C fall for each minute
   - Microprocewssor based control panel with L E D display
   - Audiovisual alarm
   - Temperature recorder (weekly chart)

   (b) Blood Bank Refrigerator
   - Digital display
   - Recording thermograph
   - Capacity 300 bags
   - Temperature 2-6º C

10. <u>BLOOD BANK DEEP FREEZER</u>

-80ºC volume 27 - 380 Ltrs with LCD display

11. <u>HAND AND FOOT UNIT (NBUVB)</u>

Allows for targeted UVB
Should have comfortable sitting system for the patients with computerized / digital display
Inbuilt stabilizer
Design should conform to international safety regulations and quality standard.

12. <u>NARROW BAND UVB CHAMBER</u>

whole body with built in dosimeter
24 tube vertically oriented
Computerized / digital display
Inbuilt stabilizer
Design should conform to international safety regulations and quality standard.

13. <u>ND-YAG LASER</u>

Module – Nd:Yag long pulse laser source
Wavelength – 1064 nm
Pulse Energy – 120 J (Max)
Fluence – 700 Joules / Cm2 (max) {1500 J/Cm2 (max) with optional hand piece with

a 1.5 mm diameter)
Peak Power – 27,000 W (max) to 50 W (min) {dual switch technology)
Frequency – single pulse – 10 Hertz (max)
Pulse Length – from 0.1 ms to 300 ms
Spot Diameter – 1.5 (optional) , 2.5 , 5, 7 (optional), 10 ,15 & 20 mm automatic spot recognition system
Electronic control – Microprocessor
Control Panel – Colour touch screen LCD
Laser emission control – Foot switch and / or finger switch
Beam guide – Green laser, 3 mW at 532 nm
Power supply – 230 Vac / 25 A (max) / 50-60 Hertz
Dimensions & weight – Approximately 115 Cm height , 53 cm length, 106 cm width, 170 Kg with optional module for Er :YAG and ND:YAG Q-switched

14. TARGETED PHOTOTHERAPY

Targeted UV energy deliverance
High power output with optimized output spectra
Preprogrammed doses delivered to skin
Design should conform to international safety regulations and quality standard.

15. FESS INSTRUMENT SET

- BLAKESLEY rhinoforce nasal forceps.
  Straight 13cms working length, sizes 2,3.
- BLAKESLEY rhinoforce nasal forceps.
  45° upturned 13cms working length, sizes 2.
- BLAKESLEY rhinoforce nasal forceps.
  90° upturned 13cms working length, sizes 2.
- Mackay-Grunwald rhinoforce nasal forceps.
  Thorough cutting, tissue repairing.
  a) Straight, size 2, length 13cms.
  b) Upturned, size 2, length 13cms.
- Stammberger antrum punch.
  a) Right side backward cutting, length 10cms.
  b) Left side backward cutting, length 10cms.
- EICKEN maxillary antrum cannula.
  a) Long curved, outside 3mm length 12.5cms.
  b) Short curved, outside 3mm length 12.5cms.
- Takahashi nasal forceps.
  Cup shaped , size 2, 13cms.
- Stammberger rhinoforce forceps
  Cupped jaws, vertical opening 65° upturned working distance 12cms, cupped jaws , diameter 3mm.
- Mushroom punch forceps for sphenoid sinus opening enlargement
  a) Straight.
  b) Curved.

- Kerrisons thorough cutting punch, straight, size 2mm, 3mm.
- DCR – Kerrisons punch, size 2mm, 3mm.
- Side bitting maxillary sinus ostium enlarging forceps, size 3mm.

16. <u>MICRO DERBIDER</u>

Micro debridors shaver system.

- For surgery of the paranasal sinuses and anterior skull base.
- Integrated suction and irrigation – microprossesor controlled.
- Variable adjustable revolution range, from 0-40,000 rev/min.
- Autoclavable.
- Modes : shaver mode
  drilling mode
  dermatome mode
  oscillating mode
- Including accessories : shaver blades – autoclavable sinus burr.
- Blades with serrated cutting edge, 4mm diameter.
- Double serrated cutting edge, 4mm diameter.
- Concave cutting edge , oval cutting window 4mm diameter.
- Concave cutting edge rectangular cutting window 4mm diameter.
- Straight cutting edge, 4mm diameter.
- Straight serrated cutting edge, 3mm diameter.
- 40° curved cutting edge, serrated, 4mm diameter.

10. Fibre optic head light with fibre optic cable 180cms long - 6 nos.

12. High frequency low temperature radiofrequency cautery.

- Frequency : 1.7 MHZ and 4 MHZ
- Power output : 140 WATTS.
- No need for ground contact or skin contact of antenna plate.
- Finger switch & foot switch activated.
- 4 wave forms a) Fully filtered waveform
  b) Fully rectified waveform.
  c) Partially rectified waveform
  d) Fulguration
  e) Bipolar

for cut, coagulation, hemostasis, fulguration, bipolar, cautery.

Accessory needles :

- Bayonate turbinate electrode
- Submucosal UPP needle electrode.
- Insulated needle electrode.
- Micro- larynx RF probes.
- Bipolar forceps.

17. MICRO MOTOR HAND PIECE, BURR SET

---

18. NASAL ENDOSCOPE FOR FESS

4mm II Autoclavable:

1. 0° wide angle - 2 Nos
2. 30° wide angle - 2 Nos
3. 45° wide angle - 2 Nos

2.7 mm II Autoclavable:

1. 0° wide angle - 2 Nos.
2. 30° wide angle - 2 Nos

ll Autoclavable 90° laryngeal endoscope - 2 Nos

CCD camera + Xenon Light Source + Recording facility + Monitor for nasal endoscopes - 2 sets

Fiber optic light carrier cable 6 feet - 12 Nos.

Halogen cold light source - 10 Nos
Fiber optic Head light with cable – 10 no

ENT INSTRUMENTS SPECIFICATIONS

1. ENDOSCOPES:

ADULTS

1. O° Straight forward telescope
   - Rod lens system
   - Wide angle / enlarged view
   - Diameter 4mm, length 18 cms.
   - Autoclavable
   - Colourcode: green.

2. 30° Forward oblique telescope
   - Rod lens system
   - Wide angle / enlarged view
   - Diameter 4mm, length 18 cms.
   - Autoclavable
   - Colourcode: red.

3. 45° Forward oblique telescope
   - Rod lens system
   - Wide angle / enlarged view
   - Diameter 4mm, length 18 cms.
   - Round standard modle, length 11cms for use with 30°, 45°, 70° endoscopes 4mm diameter. -05 nos.

3. Cold light fountain XENON NOVA. -02 nos.
Power supply : 220-240 VA
Output : xenon light 175 W, 15V.

4. Fibre optic light carrier.
Glass fibre type , 2.5mm diameter length 180cms. -06 nos.

6. Endovision tricam SL II.
- Three chip endoscope camera.
- Color system : PAL.
- Integrated parafocal zoom.
- Lens f = 14mm-28mm.
- Programmable buttons.
- Camera head autoclavable

7. Camera control unit:
- Image 1 camera control unit with DV output(digital video)
- Key board attachment.
- Signal to noise ratio >or= 60 Db.
- Video output : composit signal to BNC socket, S-Video signal to 4 pin mini DIN socket, RBG signal to D-sub socket.
- DV signal to socket.

8. DVD recording facility.
- Record digital video from camera control unit.
- Pentium duo core based system.
- 1 GB RAM
- 200 GB HDD SATA.
- 17 Inch TFT monitor, SONY.
- SONY DVD RW drive.
- Pinnacle image capture card.

9. Mobile video cart.
- 4 artistatic double casters.
- 4 shelf unit.
- 1 drawer unit.

19. PURE TONE AUDIOGRAM MACHINE

Pure tone audiogram machine. Digital.
- Facilities for air conduction upto 8 KHZ.
- Facilities for bone conduction upto 6 HKZ.
- Speech test.
- Programmable with attachment to computer.

20. AUTOPSY TABLE

Autopsy table'L" shaped design includes dissection wing with base cabinet, Base cabinet provided under the table permit additional storage, Legs provide full access under the table for sanitation and cleaning, double bowl sink, two piece construction for easy installation and flexibility for complete room wash down, wrist operated stainless steel FAUCET with hot and cold water flow control valves, "Reverse flow" Hydro aspirator with built in vacuum breaker. Construction 304 type stainless steel with large radius inside corners for easy clean up. Manufactured without revets, bolts or other devices so that work surface remains smooth and prevent cumulation of bacteria, 3 solid stainless steel sliding body supports, wooden head rest, table length 91 "Width-30" approx, Dissection wing length 62" width 30" approx.

21. ENDOSCOPY UPPER AND LOWER GI ENDOSCOPE

Endoscopic Equipment with accessories

(a)Upper GI Endoscope

It should be an integrated video processor with
In-built light source and should have the following
Features / specifications:

(a) Light weight & compact unit around 13-14 kgs or less .
(b) Video output : Y/C , RGB and VBS Composite(NISC).
(c) Large and small size option of display of images.
(d) 3 modes image enhancement.
(e) Average & Peak levels of iris adjustment.
(f) Colour settings for Red & Blue with +/-7 to 10 steps.
(g) Facility to store data for 10-12 patients
(h) 150 watts halogen lamp.
(i) Quick change-over of lamps in case of emergency.
(j) Lamp should be easily replaceable by user at site.
(k) Dedicated Keyboard.

Should be compatible to Rigid and Flexible Fiber optic Endoscopes.

b)Lower GI endoscope

Should have

(a) Special design for optimal colon insertion flexibility
(b) Silicone free Air-Water & Suction Valves for easy maintenance.
(c) 3 or 4 remote switches for maximum control of functions with the user.
(d) Single action & light weight Light Guide Connector for easy handling.
(e) Field of view More than 140 degree
(f) Direction of view 0 degree (Forward viewing)
(g) Depth of field 3mm to 13.2 mm
(h) Distal end outer diameter 13 mm 13.2 mm
(i) Insertion tube outer diameter12.6 mm to 12.9 mm
(j) Distal end bending Up & Down 180 deg.
Right & Left 160 deg.
(k) Working length 675 mm to 1685 mm

22. ULTRASONIC/HARMONIC SCALPEL

Specification for Ultrasonic and Coagulating Device (Ultra sound cautery)

1. It should have Ultrasonic generator with fixed frequency of 55.5 KHZ, transducer and footswitch capable of incising tissue and providing hemostasis with minimal thermal injury.
2. It should have both 10 mm and 5mm instruments/probes/ shears.
3. It should have 3 different audible tone setting possible.
4. It should have an option of using 5mm hand activated Laparoscopic Shears.
5. The probe of the Coagulating shear should be 360^{o} rotatable and capable of working in three modes-Flat, Blunt and Sharp mode.
6. It should have option of HAND ACTIVATION with bilateral MIN and MAX switches.
7. It should have a provision for connecting 2 footswitches for two Surgeons to work simultaneously (optional)
8. It should be a stand alone unit and should not be clubbed with any form of Electrosurgical cutting and coagulating device.
9. It should have self-diagnostic mode to detect any problem with generator, footswitch, transducer or instruments.
10. It should have an audible indicator for active shear/pro be/instrument.
11. It should have a warning system for a worn out probe/shear/ instrument with error codes.
12. It should have a maximum of 5 power level settings with power level display of both MIN & MAX.
13. Frequency of vibration should be same for both 5nm1 and 10mm diameter probes/shears/instruments.
14. It should have a vibration range of 50-110 microns(micro meters, um)
15. It should be functional for both Laparoscopic and Open Surgeries.

Accessories (a) Adaptor for 5mm, 32cm probes (b) Adaptor for Shears (c) Wrench (d) Test Tip (g) Hand switching Adaptor.

Open Surgery Instruments:

a) Coagulating Shears-Open
(b) Coagulating Shears-Open Curved Mode
(C) 10cm curved blade
(d) 14cm curved blade
(e) 10 cm sharp hook
(f) 14 cm sharp hook
(g) 10 cm dissecting hook
(h) 14 cm dissecting hook
(i) Sharp Hook-Open Surgery
(j) Flat Sharp curved Blade
(k) Ace Coagulating shears.

Laparoscopic Instruments:

(a) 5mm Dissecting hook, 32 cm, Lap
(b) 5mm Sharp Hook, 32 Lap
(c) 5mm Ball coagulator, 32 cm-Lap
(d) 5mm 32cm Curved Blade, Lap
(e) 10 mm Coagulating Shears-Lap
(f) 5mn1 Shears-Knife Mode
(g) 5nm1 Shears-Blunt Mode
(h) 5nU11 Shears-Curved Shears
(i) Ace Coagulating Shears.

23. MICROSCOPE WITH PHOTOGRAPHIC & FLUROSCENT ATTACHMENT WITH CAMERA (AUTOMATIC KARYOTYPING+CAMERA)

Microscope with Photographic & fluorescent attachment with Camera (Automatic Karyotyping + Camera) - C-mount adapter HC 0.5x for 1/2"-TV -Cameras, 17" COLOUR MONITOR,UK WINDOWS 98 COUNTRY KIT,
Automatic Karyotyping Software ,HP 930 DESKJET PRINTER
Microscope with Photographic & fluorescent attachment with Camera (Automatic Karyotyping + Camera) - C-mount adapter HC 0.5x for 1/2"-TV -Cameras,
COHU CAMERA: Cohu 4912 Mono Integrating CCD Camera 625 (HR)
Monochrome imaging for low light levels-ideal for Q Band Karyotyping
FISH and CGH applications
Image area:6.4x4.8mm (1/2"tube)
Active Picture Elements:
RS-170A: 768Hx494V
CCIR:752Hx582V
COHU CAMERA CALBE
METEOR 2 GRABBER KIT
PERFORMANCE/PC
17" COLOUR MONITOR
UK WINDOWS 98 COUNTRY KIT,
Automatic Karyotyping Software
Application solution software for karyotyping
CALIBRATION SLIDE
HP 930 DESKJET PRINTER
CONSUMABLE FOR HP 930

24. REPROGRAPHIC MACHINE (HEAVY DUTY)

Type- Console Copying System- Electrostatic Transfer System Copy Board- Fixed Maximum Original Sizes- A3(297x420mm) Copy sizes- Paper Drawer, Upper, A4 orB5 to A3 stack bypass, A6R(postcard)toA3 Copy speed- standard. 25 copies perminute in A3 33 copies per minute in B4 50 copies per minute in A4/B5/A5/A5R 60copies per minute in A4/B5(A.C. Mode) 39 copies per minute in A4R 44 copies per minute in B5R First-copy- Approx.3.0 seconds' Warm-up Time -Approx.5 minutes(20*c) Paper Storage-

Drawer- Upper: 1500 sheetsx2,Lower:500 sheetsx2 stock bypass:approx.50sheets Exposure Contol- Automatic and Manual Continuous Copying- Max.999 copies Toner Color- Block Power Sources- 115 or 220/240V 50/60Hz Max.Power consumption- Max.1.5kW Dimensions(WxDxH) - 643x725x1,168mm Weight- Approx.185 kg(407lbs)(including)

25. PLASMA SCREEN

Plasma screen 16/9 42" (106 cm) PS42V6 + K1 universal stand – black

26. DOCUMENTS MANAGEMENT SCANNER

Scan system	
Optical scanning resolution	Up to 1200 dpi
Hardware scanning resolution	Up to 1200 x 1200 dpi
Enhanced scanning resolution	Up to 1200 dpi
Bit depth	48-bit
Gray scale levels	256
Image scaling or enlargement range	10 to 2000% in 1% increments
Scan speed footnote	Scan speed: tests performed on a 3.0 GHz Media Center PC with 1 GB of RAM and Windows® XP Media Center
Scan speed (ADF)	Up to 25 ppm/50 ipm
Scan speed (ADF, A4)	Up to 25 ppm/50 ipm
Scan speed (OCR, A4)	<25 sec
Maximum scanning size	215.9 x 355.6 mm
Photo and Smart Features	
Auto document feeder capacity	Standard, 50 sheets
Button functions	4 front-panel buttons : scan, copy, profile functionality/tools, cancel, button settings, 2-digit LCD
Other technical information	

Scan input modes	Front-panel 4 buttons, Scan, Copy, tied to a rocker switch and 2-digit LCD and user application via TWAIN/ISIS with 30 user flows (programmable) and a cancel
Scan file format	PDF, PDF or JPEG, TXT , UNICODE, RTF, HTM , DOC, WPD, XML, XLS, OPF, JPG, TIF, G3, G4, uncompressed or JPEG, PNG
Compatible operating systems	Windows® 98 SE, 2000, Me, XP Home, XP Professional, XP Professional x64 Edition
Standard connectivity	Hi-Speed USB - compatible with USB 2.0 specifications
External I/O ports	1 Hi-Speed USB - compatible with USB 2.0 specifications
Minimum system requirements	Photo & Imaging software minimum system: Pentium II Celeron or compatible for Windows 98, 2000, Me, XP Home, XP Professional, XP Professional x64 Edition; 64 MB RAM; 175 MB hard disk space plus 50 MB for full-colour scanning; CD-ROM drive; USB port; Internet Explorer 5.0 or higher; for Precisionscan Pro minimum system: Pentium II Celeron or compatible for Windows NT 4.0; 32 MB RAM; 50 MB hard disk space for full-colour scanning; 800 x 600 SVGA monitor; CD-ROM drive; please note that in-box software may require higher minimum system requirements
Energy Star certified	Yes
Dimensions (W x D x H)	320 x 270 x 312 mm
Weight	5.4 kg
Package weight	7 kg
Electromagnetic compatibility	EU (CE certification of conformity), North America (FCC), Australia (SMA), New Zealand (SMA), Russia (GOST), Korea (MIC), Taiwan (BSMI)
Operating humidity range	15 to 80% RH
Non-operating humidity	0 to 90% RH
Recommended humidity operating range	15 to 80% RH
Operating temperature range	10 to 35º C
Recommended operating temperature range	10 to 35º C
Power consumption	35 watts maximum
Power supply type	External
Power requirements	Input voltage: 90 to 264 VAC, 47 to 63 Hz
Safety	IEC 60950 Third Edition (1999), national derivatives, associated voluntary and mandatory certifications: Canada (cUL), China (CCC), Russia (GOST), European Union (TUV GS), Taiwan (BSMI), USA (UL); other: Mexico (NOM)
Storage Temperature	-40 to 60º C Range

27. MOVABLE RACKS

7feet Ht, 18 guage, 5 Selves, on tracks, moving control, 3 units

28. QBC/AUANTITY BFFY COAT FOR DETECTION OF MALARIA PARASITE

QBC Centrifuge

The QBC centrifuge is a compact, low-profile unit measuring less tan 13 centimeters high with cover down, and housed in a sturdy plastic case. The centrifuge incorporates a 20 place rotor, rotor, mounted to the shaft of brushless D.C motor. In addition to shock mounting of the motor to minimized vibration, the centrifuge rests on four suction feet for added stability.

A protective metal cover, with threads into the motor shaft, keeps the spinning tubes snugly in place o the rotor. The hinged top lid with safety latch provides a housing or shield around the rotor during operation. Electrical power to the centrifuge is controlled by a momentary ON/OFF power button located on the front desk. Before the motor will start, the top lid must be closed and latched. Once a spin cycle has started a safety interlock prevents the lid from being opened until the rotor brakes to a stop. The spin cycle is controlled by an electronic timer on the main circuit board, spin time is fixed at 5 minutes.

Rotor Capacity : 1 to 20 QBC tubes
Rotor Speed : 12000 rpm
Nominal Relative Centrifugal Force : 14,387 x g.
Timer : Electronic, 300 seconds spin.
Electro-Mechanical Safety interlock : Lid must be closed latched beforemotor can be energized. Lid remains locked until rotor stops.
Weight : 2.8 kg (6.2lbs)
Dimensions : 23.5cm W x 29.8.cm D x 12.7cm H

Power Pack

Input : 240 V AC +/- 10%, Output : 47 V DC +/- 3 volts
DC Output cord ; o.46m (1.5ft), AC line cord ; Standard Cord : 2.3m (7.5ft), Fuse : 5.0 Amp, 250 V. F-type.

QBC MALARIA TEST-KIT

Reagent per Tube (max) : Acridine orange (5.6UL), Potassium Oxalate (0.3.mg). Sodium (3.8usp UNITS), k2edta (0.44MG), closures, floats.

Malaria ATLAS

Fluorescent images of Plasmodium species, stages and M.filarial.

29. TRANSCRANIAL DOPPLER

- ---
- ---

30. VIDEO E E G MACHINE WITH 128 CHANNEL

1. The system should be a high end, high performance imported video EEG with 40 channels Amplifier (32 Monopolar & eight bipolar Channels)

2. The Amplifier should have a high bandwidth (DC to 15 KHz)
3. The amplifier should have minimum 16 Bit A/D converter and should have a max sampling rate of 8000Hz
4. The Amplifier should have a sensitivity/resolution of 0.125mV/Bit and CMRR>110dB and input noise 0.3uv to ensure high sensitivity
5. The acquisition unit should be interfaced with PC by fiber optic link for maximum noise reduction
6. The system also should have the facility to connect the Amplifier through Ethernet
7. The PC work station should have the latest Pentium IV CPU with HT and 512MB of RAM. A color inkjet printer and CD/DVD RW also to be provided
8. The system should operate on the latest Windows XP platform
9. The system should have facility to do Amplitude and frequency mapping on 3D head model.
10. The system should have a custom cart to house all components of the system with retractable keyboard, integrated power supply and isolation transformer
11. The system should be able to upgrade to polysomnography (sleep studies) with additional software and sensors.
12. The CD/DVD writer should be able to archive EEG data on a CD which should have the capability to be read on any PC without any additional software
13. Should have the facility for remote troubleshooting via modem
14. A remote event marker has to be provided
15. The System should have an inbuilt impedance check facility. The impedance check should be able to perform both at the PC side and with the head box side. There should be an indicative display on the head box for the impedance display
16. The system should be complete with a remote floor stand for acquisition Unit and high energy LED flash stimulator. Comprehensive database management should be also available
17. The system should comply with CE and IEC standards and quality marks

18. The system should be provided with a networked review station of latest specification to review EEG. This review station should be able to display the EEG being acquired.
19. Additional software should be provided for 2D & 3D brain mapping

An appropriate UPS has to be supplied

31. NEONATAL OPEN CARE SYSTEM

Open care systems Automatic temperature control, infant and skin probes, examination lamp, halide lamp emitting blue light for phototherapy Specifications with minimum following features:
Power Source: Voltage rating: 220/240 at 50 Hz
Power: 300 w nominal
Operating Mode Servo mode, Manual mode
Patient Temperature Measurement:
Range: 25 C to 50 C
Accuracy: + 0.2 C within range
Resolution:O. 1 C
Control Temperature Range
: Servo mode: 34.0 C to 39.0 C
Manual mode: 28.0 C to 39.0 C:
Overheat cut off temperature: 39 C nominal.
Alarm Indication: Acoustic and Visual warning with automatic heater cut off
Heater Control: Features zero voltage switching which minimizes electromagnetic interference
Air Filter: Removes airborne particles down to sub-microns
Humidity Control: Desired level of humidity can be set using humidity regulator
Oxygen Concentration :Upto 40% using standard facility
Increased oxygen concentration can be achieved using optional oxygen hood.
Environmental characteristics: Ambient operating temperature: 21 C to 30 C
Storage temperature: 25 C to 60 C
Baby Tray Tilt: 8 degree in either direction.

32. HYSTEREOSCOPY SET

Diagnostic Hysteroscope
Forward-Oblique Tele- scope 30°, ø 4 mm, length 30 cm, autoclavable, fiber optic light transmission incorporated, color code: red
Examination Sheath ø 5.1 mm, with 1 LUER-Lock adaptor
Operative Hysteroscope
Operating Sheath, size 5.4 mm, with channel for semirigid 5 Fr. operating instruments, with 1 stopcock and 1 LUER-Lock adaptor, for use with CF operating sheath 26154 BO
Continuous- Flow Operating Sheath, size 6 mm, with 1 stopcock and 1 LUER-Lock adaptor, for use with operating sheath 26154 BI
Scissors, blunt, single action jaws, semirigid, 5 Fr., length 34 cm
Biopsy and Grasping Forceps, double action jaws, semirigid, 5 Fr., length 34 cm

Punch, through-cutting, single action jaws, semirigid, 5 Fr., length 34 cm
Myoma Fixation Instrument, semirigid, 5 Fr., length 40 cm
Bipolar vaporization electrode, semirigid, 5 Fr. length 36 cm
Needle Electrode, unipolar 5 Fr., length 34 cm
Ball Electrode, unipolar, 5 Fr., length 53 cm

33. RADIO FREQUENCY DIATHERMY
High frequency low temperature radiosurgical unit

Specifications
Frequency:3.8MHz
FDA approved
Four wave forms and five modalities of operation(fully filtered, fully rectified , partial rectified, fulguration and diathermy)
Finger switch and foot switch activated
Computerised auto startup and indicator
Detachable powercard and waterproof switch
Autoclavable and disposable hand pieces and neutral plates
Power:
Line voltage:220/240V AC 50/60 cycles
Output:140W

Standard Accessories
Electrodes
Finger electrodes with flexible staff
Javate DCR electrodes (6 DCR electrodes R7S R7L R9S R9L R11S and R11L)
Wedge resection electrodes TEE 235
Mucotome electrodes 3H140

34. KERATOMETER – HANDHELD
Keratometer for measuring the corneal curvature
Hand held and portable.
Automatic Keratometry
LCD display of measured values.
Comfortable working distance.
Suitable printer.
Suitable AC adapter cord.
Suitable accessory for attachment to a slit lamp
Carrying case.
Radius curvature:
Range 5.00mm to 10.00mm
Steps: 0.01mm
Refractive power:
Range : 33 to 67 D
Steps: 0.01/0.12/0.25D

Astigmatism range:

0-+/-10.0D

Steps:0.01/0.12/0.25D

Axis:

0 to 180

Step 1

Compatible with local power supply.

35. OPERATING MICROSCOPE FLOOR MOUNTED – OPHTHALMALOGY

1. Microscope

A binocular stereoscopic type microscope with built in illumination provided with facility for changing the magnification without disturbing other alignments i.e., when the magnification is changed the image remains the in focus.

2. **Performance requirements**.

a) Binocular optical head with Co-axial illumination.

b) I) Eye piece : wide filed minimum 10x to 12.5x individually adjustable

II) inclined binocular tube 45

III) XY Coupling.

IV) Should have diopteric adjustment of -5.00.

V) Interpupillary distance : 55mm to 75mm

c) Objective lens : Focal length ('f' minimum 175 + 1-25 & above)

d) Working distance : To be stated for each alternative not less than 150 mm.

e) Total magnification : 4 to 17.5x or more. If stepped, thesteps to be stated.

f) Beam Splitter

g) Assistant Binocular Microscope : Assistant Microscope to match the focusing of Main Microscope.

h) Field vision : Range 40 mm to 50 mm or more (At the minimum magnification)

i) Focusing (Motorized)

j) Motorized foot control

3**. Illumination**

a) Intensity : To be stated in lux maximum 80,000 lux or more.

b) Type : Coaxial Dual lamp/by optical light guide. 6 Halogen bulbs: Voltage (12V)Wattage (100Ws) and secondary power source to be stated by bidder. Fan Cooling arrangement required as a minimum.

c) Field : Range 45 mm to 60 mm or more.

d) UV filter : U.V. Filter switch able facility for occluding papillary light.

4. **Construction (Mounting & Adjustments)**

A) a) Arms : Counter balanced spring type

b) Horizontal lengths of Arms : not less than 800 mm

c) Range of Vertical Adjustments : 300 to 550 mm or more.

d) Rotation of arms : not less than 300.

B) Base : the base should be stable and should not topple when optical units articulated arm is fully extended.

Dimension of base in mm: To be stated by the bidder.

C) Means of Mobility : TO be stated and stability & Safety arrangements described in details by the bidder.

5. **Electric Supply** :

a) Electric supply at AC 220 to 240 V, 50 Hz.

6. **Spares** :

6 Bulbs : Halogen, 12 V, 100 Ws

7. **Accessories / Facilities**

a. Sterilizable & detachable caps for bobs – 2 sets.
b. Dust cover of covering in microscopes – 1 No.
c. TV camera adapter with CCTV system (Colour video camera, camera cable with plug 10m, color monitor 30 inch loudspeaker, professional VHS VCR/ digital imaging)

8. **Instruction booklet** :

   a. The microscope should be provided with instruction booklet giving description of the instrument and its functions and instructions for use and maintenance of the instrument.

   b. A service Manual to be provided with each equipment.

9. **Maintenance Support** :

   i) Bidder should state the arrangements that exist to provide post-Warranty period support for maintenance of the instrument.

   ii) Five year on-site full warranty.

36. SLIT LAMP

Slit lamp
Microscope
Type: Binocular
Magnification changer: Two steps
Eyepieces:10x and 16x
Slit lamp:
Slit projection
Slit width-continuous 0 to 8 mm at least.
Slit length- continuous 1-8 mm at least.
Filters for redfree and blue light examination.
Lamp= Tungsten or halogen.
Base
Vertical and horizontal movements should be of reasonable range.
Chin rest: vertical movement should be of reasonable range.
Fixation lamp.
Suitable motorized stand

37. ARTHROSCOPY WITH COMPLETE INSTRUMENTS & POWER DRILL

- ---
- ---

38. POWER DRILL WITH SAW - PNEUMATIC

Driving Unit includes Motor 90 watts 220 V/ 5 amp AC /Dc Stand, Foot control,Flexible Shaft, Tool Kit, Oil Bottle & Special Container With built In MCB. Cannulated Drill Handpiece max. speed 1200 rpm and with fixed S.S. Chuck (0-1/4")5.5 mm Cannulated. Saggital saw handpiece with saw blades. (Pistol type) Aotoclavable -- 17500 CPM oscillating type. Five types of Blades can be set at 45 ' & 90 '. Blades from Hardened & tempered high quality Steel. Reaming system includes :

Reamer shaft with fixed head - 8mm dia., flexible reamer shaft for detachable heads, Reamer heads detachable (8.5 mm to 12 mm) Reamer Handpiece 400 RPM with AO type Q.C. Flexible Cable Length 2 mtrs Push pull type ends. Wt 1000 gms.

39. COLONOSCOPE WITH ACCESSORIES

Field view 140°

Outer diameter at the insertation to be less than 12 m and channel Dai less than 35mm
Field of view must be greater than 130 min depth of tied should not be none than 3mm
Depth of field –3mm to 100mm
Must have adjustable flexibility to suit all the internal conditions and contours at the colon by having provisions to adjust in the scope itself
Working length must not be lesser than 130cm and not more than 172 cms stiff nes –should v variable
Auxiliary water channel should be present
Light guides-3 light guides
Image quality –high definition image
There should be information about the model name, serial no, as well as number at times the scope has been connected to processor
Also must have automatic control at white balance
Electro surgical snare –1) oval type
2) Crescent type –Eechh one

XENON LIGHT SOURCE

Source of light must be xenon with maximum wattage at xenon bulb 300watts
Must have emergency lamp lamp inside the light source and it should switch on the automatically when main lamp fails , without any adjustments
Light source van be either built in or can be separated

Monitor

Sony 14'' medical grade monitor
Flushing pump –1
Mobile work station –trolleys to keep the equipments –1
Endoscopy suction pump-1
Endoscopic ultra sonoc cleaner –1
Video convertor

40. ESOPHAGAL DILATOR - SET

Safe Guide Over the Guide wire Dilatation System (16 piece set):

16each Dilators (15,18,21,24,27,30,33,36,39,42,45,48,51,54,57,60fr)

1 each Marked Spring Tip Guide wire

1 each Cleaning Brush

25 each Disposable Cleaning Adapters

1 each Carrying Case (holds 16 dilators)

Safe Guide Over the Guide wire Dilatation System (7 piece Set):

7 each Dilators (15,21,27,33,39,42,45fr)

1 each Marked Spring Tip Guide wire

1 each Cleaning Brush

25 each Disposable Cleaning Adapters

1 each Carrying Case (holds 16 dilators) .

41. **PAEDIATRIC BRONCHOSCOPE 6F & 5F WITH ACCESSORIES**

FLEXIBLE BRONCHOSCOPE

Paediatric broncho fiberscope.

Instrument channel: 1.2mm.

Direction of view 0 deg

Angle of view 110deg

Working length 54cm

OD: 3.7cm\

Accessories required:

Case.

Biopsy forceps, double action jaws flexible, 1mm, length `110cm.

1 grasping forceps, double action jaws flexible 1 mm length 110 cm.

1 pressure compensation cap for ventilation during gas sterilisation.

1 leakage tester with bulb and manometer.

CLEANING Brush, flexible for 1.2mm instrument channel 1 mouth piece. Optical biopsy forceps, for use with telescopes PAGE 2.

Optical alligator forceps, for use with telescopes

Rigid suction tube with rubber tip, working length 50cm, straight and curved

Sponge holder, spring holder, working length 50 cm,

Radio opaque plastic tubing for aspiration, 7 Fr, 5 m coil, with adapter

RIGID BRONCHOSCOPE

PAEDIATRIC BRONCHOSCOPES EXTENDED LENGTH WITH PROXIMAL ILLUMINATION

Special features:

- Adjustable proximal prismatic light deflector
- Maximum lumen and small external diameter
- No loss of lumen through light carrier

Pediatric bronchoscope –extended length

Consisting of: Bronchoscope, size 6, length 60 cm,

Prismatic light deflector with connection for fibre optic light cable.

Glass window plug

Rubber telescope guide

FLUVOG adapter with sliding glass window plug, sealing cap, notched lens and Keyhole opening, movable.

Injection cannula , O.D 3.5mm,

For positive pressure assisted ventilation system, for use with bronchoscopes

Instrument guide for aspiration catheter.

Adapter to respirator

Sealing plug for respiration connector.

Adjustable magnifier, swing –away type

ACCESSORIES:

Straightforward telescope 0°,diameter 2.8mm,length 44cms. Fibre optic light transmission incorporated. Colour code: green

Lateral telescope 70°,diameter 2.8mm,length 44 cm fibre optic light transmission.

Colour code: yellow.

Optical forceps for peanuts and soft foreign bodies, for use with telescopes.

Optical biopsy forceps, for use with telescopes

Optical alligator forceps, for use with telescopes

Rigid suction tube with rubber tip, working length 50cm, straight and curved

Sponge holder, spring holder, working length 50 cm,

Radio opaque plastic tubing for aspiration, 7 Fr, 5 m coil, with adapter

Telescopes for use with bronchoscopes adjustable position

Straight forward Telescope 0 deg

Diameter 2.9mm length 36 cm.
Fibre optic light transmission incorporated.
Colour code green

Forward –oblique telescope 30 deg
Diameter 2.9metre length 36 cm
Fibre optic light transmission incorporated
Colour code: red

Lateral telescope 70 deg
Diameter 2.9mm length36cm
Fibre optic light transmission incorporated
Colour code: yellow

Rubber telescope guide

Telescopic Bridge for a fixed position between telescope and bronchoscope

Optical paediatric forceps for Bronchoscopes -Esophagoscopes

For use with bronchoscopes length 30 26 & 20 cm sizes 6- 3.5;
Straightforward Telescope 0 deg
Diameter 2.9mm length 36 cm.
Fibre optic light transmission incorporated.
Colour code green

Optical alligator forceps for use with telescope for hard bodies

Optical forceps for use with telescope for peanuts and soft foreign bodies

Optical forceps for use with telescope for biopsy

Optical Forceps for use with telescopes universal biopsy and grasping.

42. PAEDIATRIC GASTRO DUODENOSCOPE

- ---
- ---

43. PAEDIATRIC LAPRASCOPIC SET WITH ACCESSORIES

Specifications for Paediatric video laparoscopic system

3 chip camera

- Integrated zoom lens
- F 25-50mm
- Beam splitter (for teaching purpose)
- Digital zoom
- Freeze frame facilities
- With digital video
- With DV Cable

Insufflator

- 20litres advance continuous electronic CO_2 , flow technology (not intermittent flow). should not have any disruption between gas flow and pressure reading.
- Digital decimal (0.1 Resolution) display of flow and pressure parameters.
- User selectable safely blow-off pressure settings.
- Pressure releasing mechanism should be controlled by inbuilt software
- Measurement of pressure upto 50mm of mercury.

Telescope

Rod - lens technology 5mm 0^0 , length 24cm(1 no)
Rod - lens technology 5mm 30^0 length 24cm (1 no)
Autoclavable and wide angled.

Instruments:

- 3mm dissecting and grasping forceps, double action jaws, length 20cm - 1
- 3mm dissecting & grasping forceps heavy, double action jaws, length 20cm -1
- 3mm dissecting and grasping forceps with ratchet single action jaws with
  atraumatic fine serration - 1
- 6mm size Trocar with conical tip, cannula with LUER Lock connection for insufflation length 5cm, silicon leaflet valves - 1
- 3.5mm trocar, with pyramidal tip, cannula with LUER Lock connection for insufflation length 5cm, silicon leaflet valves - 1
- 3mm Scissors length 20cm with serrated jaws curved conical double action jaws.
  - 1
- 3mm scissor length 20cm single action jaws - 1
- 3mm coagulation and dissection electrode length 20cm L shaped insulated with connector pin for unipolar coagulation. - 1
- 3mm palpation probe distendable length 20cm - 1
- 3mm micro needle holder handle with rachet length 20cm
  - 1
- Irrigation and suction cannula with 2 way stop cock - 1
- 2 way stop cock - 1
- 3mm pylorotome length 20cm distendable - 1
- Knot guide with eyelet - 1
- Clip applicator - 1

ACCESSORIES:

Electro surgical unit (Cautery)

Electro surgical unit (Cautery) with bipolar cut and coagulation, under water operation, spray coagulation, 300 watts, unit should have cut control, with minimum necrosis. High cut with specialized arc regulation for under water cuts or in fatty structures. Soft coagulation for precisely controlled coagulation, no carbonization, less adhesions. Bipolar coagulation for greater safety. PPS for intelligent support or initial incisions and cutting should include HF cables both bipolar and unipolar. Foot switch, patient plate 1set.

Medical grade monitor 20 inch	1
Endoscopic trolly	1
Gas cylinder (CO2) 9kg	1
High pressure tubing	1
Cidex tray	1
Formalin chamber 26inch	1
Servo stabilizer 1.0KVA	1
Fibre optic light cable length 250cm	1
Verres pneumoperitoneum needle,length 150mm	1
Screen monitor	1
HF Cable	2

44. RADIANT WARMERS

Specifications of infant warming system

Should be modular system with future expandability \upgrade for additional functions

Should have a mechanism that automatically focuses warmth on baby on movement of

Radiant heater, resulting in even heat distribution

Should have integrated or optional early warming of thermal stress by

- Measurement of central and peripheral temperature
- Continuous measurement
- Large easy to read display

Should have a soft heated gel mattress

- For even distribution of heat
- Reduction of output from radiant warmer
- Warming up of thermally stressed (cold) infants

Should have easy access to baby with a swivel mechanism (no direct heat for the care staff)

Control panel should be easy to read with alarm and text messages should available

Should have standard scope of supply for

1.warming unit
2.skin survo mode
3.alarm facility with thermo monitoring
4.bed tilt facility
5.heated gel mattress

Optional facility should be available for
Height adjustment
Storage drawers
Infant scale
Data Grasping forceps, double action jaws, flexible, 3 Fr., length 28 cm
Biopsy forceps, double action jaws, flexible, 3 Fr., length 28 cm
Accessories:
Ball electrode., 3 Fr, length 53 cm and same 4 Fr
Needle electrode. 3 Fr., length 53 cm, and same., 5 Fr
Rubber tip, perforation 0.8mm
Catheter connector fits LUER-LOCK syringe, for use with urethra catheters, small.
LUER-LOCK connector,
LUER-LOCK connector, with stopcock, detachable.
TOOMEY syringe, 50 cc
Catheter adapter.
Adapter to connect syringe to cyst scope- uretheroscope sheaths

45. PHOTOTHERAPY UNIT DOUBLE SURFACE

Double surface units with narrow band blue lights and white lights, inbuilt spotlight and halide lamps.

46. KYMOGRAPH

A. Super Speed Kymograph
B. Starling's Respiration pump 500cc Capacity geared motor coupled
C. All main's AC Time clock.

47. PHYSIOGRAPH WITH 2 CHANNEL CONSOLE

Digital Student Physiograph III Chnl. (II+I) with Time & Event Channel and Stimulator. (9 speed chart drive)
Couplers : Strain Gage,Pulse/Respiration,
Temperature, EKG, Bio Potential and Isotonic,

Transducers : Volume,Force (Muscle Activity), Pulse, Respiration,Isotonic,Respiration Belt and Temperature. Accessories : EKG Electrodes set, V Pin Junction Box, Jelly, Straps, III pin Junction Box,EMG Leeds,EEG paste,Spares like fuses,capillary,Electrodes for Action Potential, Ink writing pen and Chart Paper Z fold 250 folds (10 packets) with Data Acquisition system (Digital Interface to convert Physiograph recordings to a computer) without computer.

48. POLYGRAPH WITH 8 CHANNEL

Polygraph VIII Channel comprises of a. Console, b. Amplifiers, c. Transducers and d. Accessories.

a. **Console :** Polywrite Console Standard Rack Mount on castors, as per GRASS U.S.A. The Horizontal section houses the ten speed chart drive, Galvanometers (Modular) with stabilized Ripple Free Power Supply and the Vertical Section Housing the Amplifiers and with ink pens and ink well assembly.

Ten Chart Speeds provided are :- 50,25,10,5,2,1,.5,.25,.1,.05 mm/sec.

Console four channels with time and event channel 1 & 10 seconds range.

b. **Amplifiers:-**

1.Ultra Low Noise, Ultra High Sensitivity AC Amplifiers : (With four lead selection) : Noise level less than 1 micro volt, sensitivity upto 5 micro volt. Applications: ERG, All A.C. Phenomena like EEG, EMG, ERG, ECG etc.

2.Ultra Low Drift Ultra Low Noise, Ultra High Sensitivity D.C. Amplifier: Drift 2 micro volt/ degree C, Noise level less than 1 micro volt, sensitivity upto 5 micro volts. Applications : All D.C. Phenomena and Strain gage type of transducers.

3. EKG Phono Pulse Amplifier

4. Ultra Low Noise, Ultra Low Drift, Ultra High Sensitivity, Universal Bio Amplifier : Noise level less than 1 micro volt; drift 2 micro volt/degree C, sensitivity upto 5 micro volts. Applications : ECG, ENG,
ERG, EMG, Phono Cardiogram, EEG, Strain gage, Pulse, Respiration, GSR and any other A.C. or D.C. phenomena.

5. Ultra Low Drift, Ultra Low Noise, Ultra High Sensitivity, All Purpose Amplifier : Drift 2 microvolt/degree C, noise level less than 1 micro volt and sensitivity upto 5 micro volt, **Applications** as Bio Amplifier.

c)Transducers :

Pressure Transducer: Strain gage using Statham Model P23 range of –30 to + 300 mm/hg. Sufficient over pressure protection. Applications: Arterial and Venous Pressure.
Volume Transducer: (Plythismograph); for low volume changes strain gage type.
Heart, Smooth Muscle, Isotonic Muscle, Isometric Force Transducer :
Respiration Transducer
Photo Electric Pulse Transducer.
Surface Temperature Probe
Phono Cardiogram Transducer
Internal Temperature Probe

d) Accessories:-

1. EKG Limb Electrodes with straps 4 nos.

2. Chest Electrode
3. EEG Electrode
4. Extra Pen Ink Writing
5. Extra Pen Cradle
6. Ink Half litre
7. EEG Paste
8. ECG Jelly tube
9. Three Pin Junction Box
10. Five Pin Junction Box
11. Fuses
12. Earthing Cord
13. Instruction Manual
14. Machine cover

Chart Paper Z fold VIII Chnl. – 10 packets

Data Acquisition System for Polygraph VIII Channel without Computer but with provision to convert Polygraph records into a computer and also for independently computing Heart Rate Variability with ECG.

49. SPECTRO PHOTOMETER

wave length monochromator 340-960nm, to measure % T. OD absorbent concentration, wave length resolution 1nm with digital display

50. COMPUTERISED POLYGRAPH

(8 channel) Applications used include :

1. Indirect calorimetry
2. Anaerobic threshold calculations
3. Temperature measurements
4. Pulmonary function analysis
5. Respiratory gas analysis

The system should come with all the necessary accessories including power cords and cables and should be installed by the deliverer to ensure it subserves all the above functions. It should come with owner's manual guide and. The following is a summary of specifications:

1. Bio-amplifiers
2. Thermistor pod
3. Software for acquisition, analysis and display on oscilloscope, storage and print out strip chart

Software to analyze blood pressure, ECG, heart rate

4. variability, spike histogram, metabolic, cardiac output,

DMT Normalization – all on windows platform

51. COMPUTERISED SPIROMETER

Suitable for measuring pulmonary volumes and capacities.

The system should come with all the necessary accessories including power cords and cables and should be installed by the deliverer to ensure it subserves all the above functions. It should come with owner's manual guide . The following is a summary of specifications:

1. Measurement Device: Fleisch Pneumotachometer (unheated)
2. Flow Range: -12 L/Sec. To +18 L/Sec.
3. Volume Range: -12 L to +14 L
4. Flow & Volume Accuracy: +/-2% Resolution to 0.008L/Sec.
5. Sampling Rate: 100 samples per second (4096 byte resolution)
6. Test Storage: Unlimited (average usage approximately 6Kbytes per patient per session); 30 sec per test.
7. Calibration: 3.00L Creative Biomedics Calibration Syringe.
8. BTPS Temperature Correction:
9. Automatic, accurate to 1 degree C.
10. Sensor Dimensions: 6.5in x 5in x 3in (16.5cm x 12.7cm x 7.6cm)
11. Sensor Weight:1.25 lbs. (0.57 kg)
12. Standard Compliance: ATS, ECCS, SSD, OSHA (COTTON DUST) CE, UL, ISO 9001/EN46001.
13. Computer Requirements: processor (486 or higher recommended), 1 GB RAM, 60 GB Hard Disk, VGA Graphics, RS 232 Serial Port, Parallel Printer Port.
14. Colour printer.
15. Tests performed:
    Pre/ post FVC, SVC, MVV
    and challenge with bronchial
    provocation software
16. Patient database
17. Pulmonary consult interpretation software
18. Trend reports
19. Predicted normals including predicted formula for south Indian population and NHANES III

52. TEADMILL WITH EXERCISE PHYSIOLOGY SYSTEM FOR CARDIO PULMANERY LAB

This is a complete physiology recording system for monitoring cardio-respiratory and metabolic function during exercise. It displays continuous real-time measurements of metabolic parameters such as CO2 and O2 concentration, airflow, temperature of respired air, ECG or EMG, indirect calorimetry, temperature measurements, anaerobic threshold calculations. It is also used for online or offline calculation of parameters such as VCO2, VO2, Respiratory exchange ratio.
The system should come with all the necessary accessories including power cords and cables and should be installed by the deliverer to ensure it sub serves all the above functions. It should come with owner's manual guide and 1 year warranty. The following is a summary of specifications:

A] Tread mill:
Folding tread mill: Motor approximate: 3.5 HP, speed: 0.5 – 12 miles / hr., inclination, rack and pinion gear, weight upto 280 lbs, user weight upto 400 lbs, running surface large belt with easy assist feature, heart rate control with wireless chest string, hand pulse grips, display: tricolour, scrolling message window, standard programs:6, user defined programs:2, heart rate programs:2, cooling fans.
B] Exercise physiology laboratory to evaluate cardiopulmonary, skeletal muscle and metabolic responses with following specifications:

1. Automated EKG stress testing system
2. Computerized metabolic carts
3. Pulse oximeters
4. Doppler system
5. Multiple Spirometers
6. Impulse Oscillometer for pulmonary function testing
7. Fully automated lab-based polysomnogram
8. Walk-in tent
9. Respiratory Flow head, Face mask, Flow Head Adapter, 35 mm I.D. Adapter, Breathing tube, Desiccant cartridge, Drying tube, Thermistor sensor

C] Muscle function:

1. Laboratory Computers and peripheral instruments for measuring EMG/EEG signals
2. Strain gauges for isometric force measurement.

temperature monitor with skin, rectal and intramuscular probes and also preferably to perform human skeletal muscle needle biopsies.

53.ENDOSCOPY SET – PLASTIC SURGERY

- - - -
- - - -

54. LIPOSUCTION SET

ELECTRIC POWER ASSISTED

LIPOPLASTY

main instrument
ELECETRIC CONTROLLER BOX
ACCESSORIES

TUBING- Silicon, Non-collapsible, autoclavable

ELECTRIC CABLE
REUSABLE CANNUALE
TRIPORT III, 4.0 MM

TRIPORT III, 4.0 MM

MERCEDES, 4.0 MM

MERCEDES, 4.0 MM

SPATULA, 3 MM

SPATULA, 3 MM

SPATULA, 2.4 MM

DOUBLE MERCEDES, 4MM

DOUBLE MERCEDES, 4MM

DOUBLE MERCEDES, 5MM

DOUBLE MERCEDES, 5MM

MIRRORED TRI-PORTII, 4.0 MM

MIRRORED TRI-PORT II, 4.0 MM

MIRRORED TRI-PORTII, 5.0 MM

MIRRORED TRI-PORT II, 5.0 MM

HELIXED TRI-PORT III, 4.0 MM

HELIXED TRI-PORT III, 4.0 MM

RASPS 5.5 MM

RASPS, 5.5 MM DIAMOND

Suction Bottles – 2 Nos, autoclavable, 2-5 litres capacity

55. MICRO MOTOR SET

Micro motor main unit 38 rpm

Drill Bits: 1, 1.5, 2 mm diameters.

Micro Drill - Open Gear Type

Drill Bits : 1, 1.5, 2 mm dia

High Speed Bone Cutter - Round Disc

Hand Piece straight, quantrangle

56. EEG MACHINE

Band pass of 1-70 Hz 19 electrodes computer displaying, digital recording 10-100 micro volts **– 1 Unit**

57. PSYCHOLOGICAL EQUIPMENT SOFTWARE

Psychological tests – Include softwares & equipments –each item

to be quoted separately

Projective Tests
Intelligence Tests
Personality Tests

Neuropsychological tests

58. NAEPHELO METER

1. Should be an open /closed system.
2. Fully automatic and rapid quantitative determinations of proteins in various body fluids (Ig G, Ig A, Ig M, C3, C4, hs-CRP etc.)
3. Easy to operate user friendly inbuilt software.
4. Quantitative and quick performance of precipitation and agglutination reactions.
5. Fast kinetic method.
6. Bar coding facility to enhance system efficiency.
7. Very high sensitivity, precision, accuracy, and high turn around time.
8. Upper detection limit of approximately 10-20 gm/ml.
9. Consumables : -
    a. In case of close systems supply of consumables (free of cost) during the warranty period at the rate of 800 tests each per year for Ig G, Ig A, Ig M, C3, C4 and 2000 tests per year for hs – CRP. Consumables have to be supplied every three to 6 months depending on shelf life and number of tests to be done.
    b. Apart from this firms have to quote all the consumables items required with rate, separately and the rate quoted therein should be frozen for three years beyond the warranty period

59. ARGON PLASMA COAGULTOR

1. The Argon Beamer system and diathermy should independently work.
2. Beamer system should have options to connect hand instruments to be used in open surgeries, Laparoscopic surgeries and endoscopic surgeries**.**
3. Beamer system should have facility to connect two cylinders at the same time with automatic changeover from one cylinder to another for uninterrupted surgical use.
4. Beamer system should have memory mode for its setting parameters for different procedures ***I*** preferences of different surgeons.
5. Beamer system should have gas flow of 0-8 liters per minute and should be adjustable-steplessly.
6. Beamer system should have automatic fault recognition system.
7. Diathermy used with beamer system should have output wattage of 325 w.
8. Diathermy used with beamer system should have monopolar cut output and should be automatic with c with beamer system should have monopolar cut output and should be automatic with computer controlled micro arc

technology .

9. Diathermy used with beamer should have memory mode.
10. Diathermy used with beamer system should have non-contact spray Coagulation mode characterized by a high energy pulsed macro arc discharge .
11. Diathermy should have automatic cut-off for coagulation mode .
12. Should be suitable for monopolar and bipolar instrument .
13. Should have two independent circuits for use of two separate instruments and should be independent of each other.
14. Bipolar coagulation should have output of 100Watts
15. Diathermy should have sensor technology with automatic cut off to prevent overheating of the tissue.
16. Diathermy should have controlled cutting with coagulation for use with Endoscopic procedures like polypectomy and papillotomy.

Argon Plasma Coagulation System Consisting of:

Argon Beamer Unit - Qty: 01 No.
HF Connection Cable, 0.5 Mts - Qty : 01 No.
Signal Cable, 0.35 Mts. - Qty : 01 No.
Double Footswitch with 3.5 Mts. Cable - Qty : 0 I No.
Sterile Filters (Pack of 50 Nos.) - Qty : 02 Nos.
Pressure Reducer **With** Connection Line **3 Bar** - Qty : 02 os.
Elektrotom - Qty : 01 No.

Accessories for open surgery:

Beamer Hand Piece For OpenSurgery,3.0 Mts. - Qty : 01 No.
Flushing Connector For Applicators - Qty : 01 No.
Applicator, Flexible, 100mm For Coagulation - Qty : 01 No.
Applicator, Flexible, 100rnm For Cut *I* Coagulation - Lancet - Qty : 01 No.

Accessories for Endoscopic Use:

Connection Cable For Flexible Probe, 2.0 Mts. - Qty : 01 No.
Flexible Probe For Beamer GIT 2.3mm -Qty: 01 No.

Flushing Adaptor For Flexible Probe - Qty : 01 No.

Accessories for Laparoscopic Use:

Beamer MIS HandleWith2ButtonsLine 3mts. - Qty: 1No.
Protection Tube ForBeamer MIS electrode - Qty : INo.
Beamer MIS Electrodewith Needle -Qty: INo.
Beamer MIS Electrode With Lancet - Qty: lNo.

60. SIDE VIEWING DUODENOSCOPE WITH GUIDE WIRE LOCKING MECHANISM WITH ERCP ACCESSORIES

The system should consist of
1. Side viewing video duodenoscope
2. Videoprocessor
3. Xenon light sources
4. Monitors

Specifications of side viewing video duodenoscope

1. Should have provision to lock the guide wire in position mechanically.
2. Detachable distal cover for easy cleaning of the scope tip.
3. Must be slim diameter of not less than 11.3mm.
4. With working channel of 4 to 4.2mm
5. Depth of field must be 5 to 60mm.
6. Should be supplied with accessories for performing ercp procedures
    a. Guide wires
    b. Universal sphincterotomes
    c. Needle knives
    d. Baskets
    e. Balloon catheters
    f. Stents

Specifications for video processor

1. Must have provision for high defition imaging capabilty to study the mucosal structures
2. Optical image enhancement function study the pit patterns of the capillaries and veins.

3. Must have hd/sd sdi output for high quality video image transfer.
4. Must have provision for storing the still images on xd cards thru pc card adaptor
5. Must have provision for storing the moving images via ieee 1394 by using remote switches.
6. Electronically should have provsion for magnification of images upto 2x.
7. Should have provsion for enhancement of larger mucosal structures with high contrast and observation of smaller structures such as capillaries.

Specifications for xenon light source

1. Must have specific optical image enhancement filters.
2. The unit should switch off when the unit is not in use for longtime.
3. Should have provision for 300 watts maximum illumination.
4. Automatic light adjustment of the intensity.

Specifications for the monitor

Must be 19 inch lcd with progressive scan and high denition and more than 1000 lines.

61. EQUIPMENTS OF LESSER VALUE:

a. PUBLIC ADDRESS SYSTEM

1. Control IC speaker 75 watt -1 pair
2. 350 watt Amplifier -1No.
3. Cordless Microphone -1No.
4. Collar Mic - 1No.
5. U H F cable microphone - 1No.
6. Control I C speaker Bracket - 1 pair
7. Job with Casing,Wiring with speaker wire wire(40stand)/mtr-1Job
8. D V D Player - No.

b. CAMCODER – D V D

Video Camera, DV/DVD format with atleast 12 x optical resolution including sound and picture capability of approximately 2 mega pixels and necessary accessories like software, cables and memory card minimum 1 GB. -1

c. DIGITAL WEIGHING SCALE (ORGANS)

Organs weighing scale, Complete SS platform for easy cleaning and anti-staining, Platform size 350mm x 350mm approx, To weight a maximum of 15 Kg.

Accuracy 2 gms. SS 304 grade construction, Rechargeable battery back-up pack provided for usage in power failure, TARE function provided, imported load cells for enduring performance, Digital Display.-2

d. DIGITAL WEIGHING SCALE (DEAD BODY)

Dead body weighing scale, complete SS platform for easy cleaning and anti staining, Platform size 2100 mm x 600mm approx, To weigh a maximum of 200 Kg. accuracy 20 gms, SS 304 grade construction, Rechargeable battery back-up pack provided for usage in power failure, TARE function provided, imported load cells for enduring performance, & Digital Display.

e. FREEZER WITH DIGITAL DISPLAY

Freezer with digital display Net Volume : about 375 Litre capacity, laboratory freezer with stainless steel shelves Readout. : Digital Temp. Controller: Micro processor controller
Working temperature: -40 to -86 deg C.
Audible/Visual and external alarms: Built-in . Safety Lock: Inculded
Outside material: White enamel steel.
Inside material: Stainless steel
Dimensions: 860 X750X1950mm
Chamber dimensions:600X520X1200mm.
Insulation: Polyurethane Foam 130mm. Refrigerant:CFC/HCFC free.
Voltage: 230V.

f. HUMIDIFIER (ROOM)

Wireless climate center monitors environment Programmable humidistat for precise humidity control Covers 1,700 square feet 10-gallon daily output Dual air filters remove airborne particles Filter replacement indicator Quiet GE motor Wheels for mobility. With backlit digital display indicator both current, and desired room humidity
Coverage : 1,700 sq. ft.

g. VHS CASSETTES TO CONVERT VCD RECORDER WITH SOFTWARES

VHS cassettes to convert VCD recorder with software**Region-** Zone 2 **Standard-**PAL B/G Secam L **DivX/MPEG4 compatible-**Oui **Compatible Media-**DVD-R/-RW, DVD+R/+RW, DVD Vidéo, DivX, VCD/SVCD, CD Audio, CD-R/RW, MP3 (TAG-ID3), WMA, VHS **Removable recording supports-VHS Internal hard drive Internal hard drive capacity (in GB Integrated Audio Decoder-Audio converter 24 bits - 96 KHz Video Out-**1 Video composant output-1 A/V composit in-/output **Audio Out1 digital coaxial audio output1 Scart Adapter Included Accessories-Remote control Manual-N.C. Dimensions (mm)- 430 x 78,5 x 265 Weight (kg)-4,2 Other-** 4 HiFi stereo head VHS recorder 2 speed recording SP/LP JetDrive (ultra fast forward/backward) Simultaneous DVD playing and VHS recordingProgrammation VPS/PDC

h. O H P-OVERHEAD PROJECTOR

Compact and study model fitted with halogen lamp (24 V/ 250 watts) through transformer, superior cooling arrangement and folding overhead system

i. ASSEMBLY PERFUSION APPARATUS FOR MAMMALIAN EXPTS.

Thermostatic Assembly for Perfusion of Excised Mammalian Heart.Serving both for heart perfusion and all purpose two unit thermostatic organ bath. Complete assembly with stainless upright stand double reservoir, mercury manometer & with special accessories.

j. BRIGHTNESS DISCRIMINATION APPARATUS

Brightness Discrimination apparatus follows the pattern originally describe by Yerkes which is regarded as the basic type of apparatus for the investigation of discriminating capacities of a rat. It consists of an entrance compartment througha door. The next compartment is the discrimination chamber which is divided into alley-ways having wire grids as floors to make it possible to shock the animal. At the end of each alley-way there is a window for presenting a visual stimus by lighting the bulb and the window. A built-in electrical unit provides lights for visual stimulus and variable intensity electrical shock to either grid Doors are provided at the end of the alley-ways to permit the animal to go into the food compartment. The Apparatus is sunmica laminated ply shock chamber for training/conditioning of small animals such as mice and rats. The floor of the chamber consists of a grill about 25 x 25 cm. for presentation of noxious stimulus from an external source such as stimulator etc. A removable tray under the grid floor collects foeces. A sliding clear perspex front door permits easy and quick insertion of animal. Two input terminals are provided made from high quality

k. ELECTRONIC BALANCE SENSITIVE

Animal weighing balance. Direct reading. Dial type, weighing up to 10 kgs x50Gms with cast iron body finished in hammer tone green, with wire basket size 200x200x200mm to keep animals **.**

l. JUMPING BOX

Incorporates a widely used general method of inducing learned behavioral habits in animal. A series of two successive stimuli i.e., a Warning Stimulus(Audible) followed by a Noxious Stimulus are presented to the |animal and it learns to avoid the | Punishment by making an appropriate response when presented with the warning stimulus, the noxious stimulus inducing escape response in naïve subjects. The jumping box consists of two compartments divided by a hurdle and enclosed in a sound-proof enclosure. The floor of the jumping box is a grill. Each compartment can be charged electrically from 0 to 50 volts, 50 cycles per second, as required. The intensity of the Noxious Stimulus is variable . An electronic variable intensity source serves as the warning stimulus. The interior is illuminated and warning lights indicate which of its grills is electrically charged. Front doors also consists of perspex windows in them permit easy handling of the animals. The animals is viewed through these perspex windows. Made of high quality sunmica laminated teak ply.

Specification:-

1. Operating Voltage : 220V, +/- 10%,

50 Hz. AC. Only.
2. The Intensity of noxious stimulus is variable from 0 to 50V. AC, monitored by a voltmeter.
3. The wire-grill can be charged one by one which is indicated by light on the panel.
Approx. dimension : 760x350x430 mm.

m. SHOCK CHAMBER

Training/conditioning of small animals such as mice and rats. The floor of the chamber consists of a grill about 25 x 25 cm. for presentation of noxious stimulus from an external source such as stimulator etc. A removable tray under the grid floor collects foeces. A sliding clear perspex front door permits easy and quick insertion of animal. Two input terminals are provided

n. PLASMA / L C D T.V

42" L C D T.V OF ANY STANDARD MAKE.

o. MICRO FILM READER

Manual 16/35mm, Motorised 16/35mm, Motorised 16mm & 3M cartridge, Microfiche/Aperture card, Combined motorised 16/35mm & microfiche, **Lens** Adjustable **Resolution**7x-48x **Largest viewable area** Full frame 35mm **Image rotation** Manual 360° **Preview speed** Live **Capture speed** Instant **Connection** USB 2.0, Twain **Light source** Cold fluorescent **Temperature range**0-40 C **Operating system** Windows 2000(SP4), XP(SP1+) **Computer** Pentium 4 or superior with USB 2.0 interface. (can be supplied as an integrated option)

p. OPHTHALMOSCOPE – INDIRECT

Indirect ophthalmoscope
(imported with good quality optics)
Binocular
Adjustable illumination
Filters- Red free
Cobalt free
Apertures-Large, intermediate and small
Small pupil/ all pupil indirect ophthalmoscope.
Adjustable interpupillary distance
Suitable power supply(transformer) for local conditions and carrying box