Hospital Open Tender – List of Items (Anesthesia)

S.	Name Of The Items	Specification If Any	Unit(s) required*
No.			
1	CARDIAC DEFIBRILLATOR	Should be Biphasic with a maximum energy of atleast 330 Joules ( 2 joules to 330)	Three (3) Nos
		Should walk on manual and automatic extended defibrillation mode	
		3. Should have ECG/defib mode	
		4. Should be capable of synchronized cadiovorron	
		5. Should have built in ECG printer	
		6. Should have event summary facility (Records)	
		7. Should have sealed battery capable	
		8. Should have adult /paediatric paddles	
		9. Should have optional SPO2 facility	
		10. Should defibrillate through pads and paddles	
		11. Should have a colour display at least 8 inch	
		12. Should have facility to charge battery Within and outside defibrillator through extended charger	
		13. Should have extended pacemaker facility	
		14. Should be CE or FDA approved	
2	ANAESTHESIA WORKSTATION	The system should be complete with Anesthesia delivery , Inbuilt Ventilator and CO2 absorber, Gas Monitor and comprise of the following features:	Four (4) Sets.
		It should be constructed on Metal frame body.	
		It should have colored coded ring indexed fittings with gauges.	
		4. It should have pin-Indexed yoke for 1 no. O2 and 1 No. N2O cylinders.	
		5. It should have Single ON/Off pneumatic switch control.	
		6. It should have Anti Hypoxic device with lever mechanism to prevent flows less than 25% O2 and should confirm to 1:3 ratio.	
		7. It should have electronic flow meter.	
		It should have flow meter back light and steplessly adjustable deck lighting.	
		It should have Dual Selectatec back bar for mounting agent specific Vaporizers.	
		10. It should have non-return-valve on back bar to protect Vaporizers.	
		11. It should have patient block with common gas outlet, emergencyO2 flush and safety blow-off valve.	
		12. It should have both audible and visual alarms for O2 failure.	
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Hospital Open Tender - List of Items (Anasthasia)

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	13. It should have Patient Airway pressure monit manometer.	oring with
	14. It Should have Auxiliary O2 outlet	
	15. It should have two rotatable drawers.	
	16. I It Should have writing tray and monitor shel	f.
	17. It should have built-in AGSS.	
	18. It should have 2 recessed electrical power or connecting additional equipment during surgerie	
	19. It should have central braking system.	
	20. It should have module slot, parameters relate anesthesia should be module design, they can be patient monitor, e.g. CO2, AG, BIS can be option upgradable in the future.	e shared with
	21. The integrated ventilator should have the foll	owing features:
	22. Should have compatible for low flow Anesthe	sia procedures.
	23. V a minimum of 12" TFT display screen.	
	24. Should have ventilation modes such s VCV, Spontaneous and PCV, PSV, SIMV-VC+PS and	
	25. Should have simultaneous 4 waveform display V-T, CO2-T and spirometry loop (P-V,F-V,P-F).	ays: P-T, F-T,
	26. Should have user interface of both Touch screwheel for navigation.	reen and Com-
	27. Should have built-in FiO2 monitor.	
	28. Should have pressure monitoring and spiror ventilation modes.	etry in all
	29. Should have built-in Spirometry gas mixture	compensation.
	30. Should have Patient support facility in sponta where the ventilator switches over to Volume cycapnea alarm is triggered.	
	31. Should have facility to set either Tidal or Min	ute Volume.
	32. Should continuously display expired and inspenhance patient safety.	pired volume to
	33. Should have inverse IE ratio capability.	
	34. Should have electronic PEEP for better Accuracy convenience.	racy and
	35. Should have auto leak test and fresh gas cor	npensation.
	36. Should be O2 or Air driven.	

37. Should have single bellow compatible for both Adult and

pediatric patients.

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- 38. Should have Apnea detection and while in SIMV mode should automatically switch mode to CMV.

  39. The control range should be as follows:

  a. Tidal Volume range: 15 ml to 1500 ml.
  - b. I: E ratio range: 4:1 to 1:10 limited by tidal volume.
  - c. Breathe rate: 4 to 100 bpm, limited by tidal volume.
  - d. Pressure control range: 5 to 70 cm H2O.
  - e. Air pressure limit: 10 to 100 cm H2O.
  - f. Electronic PEEP: OFF, 3 to 30 cm H2O.
  - 40. Should have alarms for Low and High O2 concentration, low drive gas pressure, High and low airway pressure, High and low tidal volume, High continuous air pressure, Negative pressure, Apnea, Mains failure, Low battery.
  - 41. Should have built-in rechargeable Li-ion battery with at least 120 mins backup.
  - 42. In the event of integrated Ventilator failure the system should be capable of manual ventilation.

The integrated circle absorber should have the following features

- 1. Integrated design, no tubes connecting for drive gas and flow meter.
- 2. The material should be PPSU, Autoclavable.
- 3. Two canisters are standard configuration.
- 4. Spring loaded switch for Manual/ Ventilator control.
- 5. Manometer for patient inspired pressure.
- 6. Bypass Lever for changing Soda during surgical procedure.

Vaporizer should have the following features

- 1. Selectatec compatible Vaporizer with flow and temperature compensation.
- 2. Glass window for display of liquid level.
- 3. Large capacity: Volume should be at least 300 ml.
- 4. Should have transportation model, even if the vaporizer is turned upside down or tilting during transport: it can prevent the anesthetic agent from leaking into the metering elements or escaping air.
- 5. No recalibration: do not need to be calibrated at any time during their period of use.

Gas Monitor specification

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		➤ Should have at least 17" Touch Colored active TFT display with at least 12 waveforms and weight not more than 15 k gs including built-in batteries.	
		Monitor should have Modular in design, with built-in Li-ion battery backup for minimum 60 minutes. Temp & AGM suitable for Adult, Pediatrics and Neonates.	
		Should have Oxy CRG to judge the respiration and circulation functions in Neonates.	
		> Should have facility for Drug Dose Calculations.	
		> It should be possible to operate it through both the touch screen and a trim knob interface.	
		Should have Anesthesia Multi Gas Module (Side stream) to monitor ETCO2 & Anaesthesia Gas.	
		<ul> <li>Monitor should have arrhythmia detection (13 types), S-T</li> <li>Analysis and Pacemaker detection.</li> </ul>	
		Should have facility for future grade of 4 channels IBP, Cardiac Output (C.O.), 10 Leads ECG.	
		> 1200-hour Graphical & tabular trends of all parameters.	
		<ul> <li>Monitors should have a facility for defibrillator Synchronization.</li> </ul>	
		Monitor should have bi-directional networking facility with central Nursing station.	
		Should have SD card socket, USB ports, VGA output as standard.	
		Manufacturer should have direct service support office in India.	
		Accessories include 5 lead ECG cable, Adult & pediatric SpO2 sensors one No each, Temperature sensor skin 1 no, NIBP cuffs3 sizes, sample lines 10 nos.	
		Closed circuit (reusable) 2 nos.,	
		Isoflurane vaporizer 1 no,	
		Air/ O2 N2O hoses 1nos each , 2 kg circle absorber 1 no	
3	MULTI PARA MONITOR (Five Parameter Monitor) (ECG,SPO2, NIBP,	MULTIPARAMETER MONITOR	Six (6) Nos.
	RESP, EtCO2)	➤ It should be a touch screen modular multi-parameter patient monitor having following module wise technical specification	
		TECHNICAL SPECIFICATION	
		➤ Size and Weight	
		Size:434nnmx89mnnx206mm	

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1	1 10 2 10 2 20 24 10
	Weight: < or =11kg
	Standard module slot: 1
	N Produce
	➤ Display
	17" Colour Anti-glare TFT LCD Resolution: 1280x1024 pixels
	➤ Battery Type: rechargeable Lithium battery, 11.1V\4.0Ah
	Operating time under the normal use and full charge:, or = 60 minutes (2 batteries for 120 minutes)
	➤ Alarm
	Level: low, medium and high indication: auditory and visual
	Deticat abusical clause light calcus valley 0 rad
	Patient physiological alarm light colour: yellow & red
	Equipment technical alarm light colour: blue
	Supports pitch tone and multi-level volume
	Support custom arrhythmia tone
	➤ Input device
	Mouse input: support by USB port Keyboard: support by USB
	nort
	port
	> System output & extensible interfaces
	Ethernet network : 2 standard RJ45 socket
	Defibrillation output: 1 RJ11 socket
	Nurse call: 1 BNC socket
	Video output: 1 DVI port, 1 VGA port
	USB 1.1 port :6
	Auxiliary module rack connector: 1
	SD memory card: 2G (standard configuration)
	Analog output (ECG or IBP): option
	Trend and reviewing :
	Trend: 168 hours
	NIBP measurement reviewing: 1000 groups
	ARR event: 128 groups of ARR event and the associated
	waveform

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Alarm events: 128 groups of parameter alarm evens and

associated Parameter waveform at the alarm moment

Holographic waveform: the storage time depends on the stored

waveform And the quality of them

EMS and Module Performance:

ECG (option)

Lead mode: 3-leads ECG INPUT, 12-leads ECG input

Lead section; 1,11,111,111,111, aVR, AvI, Avf, VS (option)

Gain:  $2.5mm\Mv(X0.25)$ ,  $5mm\mv(x0.5)$ ,  $10mm\nnV(x2)$ ,

40mm\mV(x4), auto CMRR: monitor mode < or= 105dB,

diagnostic mode < or = 90dB

Frequency response (-3Db):

Monitor mode 0.5 —40 Hz, diagnostic mode 0.5 '150Hz

Input impedance : < or = 5.0MQ

ECG signal range : +10.010.0 My

Patient leakage current: <10 Ua

Standardizing signal: 1 mV + or — 5%

Baseline recovery: <5s after defibrillation. (Mon or Surgor

Mode)

Indication of electrode separation: every electrode (exclusiveof

RL)

Protection: breakdown voltage 4000VAC 50\60Hz,

defibrillator proof

Sweep speed: 12.5mm\s, 25mm\s, 50mm\s

➤ HR

Range: adult 10-300

Paediatric and neonate:10-350bpm

Refreshing time :< Or =50bpm per 2 pulses, 50-120 bpm per 4

Pulses/ or =120bpm per 6 pulses Resolution; lbpm

Accuracy-F1% lbpm whichever is greater

ST Segment

Measurement range:-2.0mV-2.0Mv

Accuracy :-0.8to 0.8Mv Resolution:0.01My

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➤ Resp

Method: thoracic impedance

Lead selected from: 1(RA-LA) or 11(RA-LL). Default 1

Gain:x0.25,x1,x2,x4

Bandwidth: 0.25Hz to 2GHz(-3Db)

Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s

Measurement Range:0-15Orpm

Resolution:1rpm

Accuracy: + 2rpm or 2% whichever is greater

Delay of apnea alarm: 10s, 15s, 25s, 30s, 35s, 40s, 45s, 50s,

55s, 60s.

➤ NIBP

Way of measurement ;automatic oscillometry

Range of Measurement

Adult: sys 30-20mmhg, Dia10-220mmhg, MAP20-235mmhg Child: sys 20-235mmhg, Dia20-220nnmhg, MAP20-225mmhg Neonate: sys 30-135mmhg, Dia10-100mmhg,MAP20-

125MMHG Cuff pressure range:0-300mmhg,

Resolution: I mm hg

Pressure accuracy:static+2% or +3% mm hg whichever is

greater

Clinical+ or -5%mmhg average error, standard deviation : less

than equal to8mmhg

Measurement mode:: auto , STAT Intervals for AUTO measurement

time:1.2.3,4,5,10,15,30,60,90minutes;2,4,8,12hours

STAT Mode cycle time: keep 5minutes at 5 seconds interval  $\,$ 

Overpressure protection: hardware and software double protections Pulse rate range:40-240bpm

Spo2 Module

It should have facility of three types of measurement Digital technique, Nellcore spo22, Masimo Spo2

Measurement range0-100%

Resolution:1%

Accuracy: at 70-100%= or-2% at 0-69% unspecified

Average time:2 -4s, 4-6s, 8s, 10s, 12s, 14s, 16s

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Measurement Range:20-300bpm
Resolution:1bpm
Accuracy:20 bpm to 250bpm, = or-3bpm, 251bpm to 300bpm
unspecified
➤ TEMP
Max CHANNEL :8
Measurement way : thermal resistance
Measurement range: 0.0degree Celsius to 50 degree Celsius(32
Degree F-122 Degree F)
Accuracy + or -0.ldegree Celsius or + or- 1 degree F
Resolution : 0.1 degree Celsius or 1 degree F
≽ Etco2
It should have facility of three types of Etco2 measurement
Side stream, Mainstream, Micro stream
Measurement method: infrared spectrum
Warm up time: capnogram displayed in less than 15 seconds at an ambient temp of 25degree Celsius, full specification within 2 minutes
Measurement range: 0-19,7 %(0-150mmhg)
Resolution:1mmhg Unit:1% , mmhg, I <pa< td=""></pa<>
CO2 Accuracy:0-40 mmhg +2mmhg,41-70mmhg±,5% of reading,70-100mmhg ± 8% of reading,101-150mmhg+10% of reading
Co2 response time : less than 3s
awRR measurementrange:2-15Orpm
awRR measurement accuracy ±1rpm
sample flow rate; 50m1/min + 10m1/min
calibration: offset calibration : auto, manual, gain calibration
> OPTIONAL
Should have option to upgrade Monitor (Optional).
IBP Non Invasive Cardiac Output (optional).
Anesthetic Gas (OPTIONAL)

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4	VIDEO LARYNGOSCOPE WITH COMPATIBLE DISPLAY MONITOR.	A. Laryngoscope Blades: - 2 blades -2 laryngoscope blades (normal Adult & small adult blade) with specially designed view tube allowing vision of 48 degree from straight line of sight. Integral oxygen port to extend the intubation time. Easy link up to Endoscopic systems provided. Blade containing replaceable fiber-optic element. Replaceable fiber clip for easy cleaning. Stainless steel, fiber-optic blades that complies with Green System (ISO 7376 (iii) compatible.) handles. Blade that fits on to international slandered ISO compatible handle. All contact points between blade and handle must be of stainless steel. Production batch number must appear on blade.  B. Optishape Stylets — 2 Stylets Re-usable stainless steel stylets (to be used with all Sizes of ET Tubes) having performed shape.  C. Rechargeable Handle — Rechargeable Handles. LED light source with light output in excess of 2,800 Lux. Must hear click when blade is engaged onto handle to protect against faulty placing of blade. Handle components of electrical system must be manufactured from stainless steel to prevent corrosion. handle conform to international standard ISO 7376 (iii)	Two (2) Nos.
5	Fast track	1. Intubating Laryngeal mask Airway Set. (Fast Trach)  2. Silicon with steel re-enforcements conforming to oropharngeal anatomy with handle with; with inflatable cuff; with pilot balloon; with lumen to pass ETT with appropriate size ETT; with stabilization rod; with cuff deflator.  3. Intubating Laryngeal mask Airway Set. (Fast Trach)Silicon with steel re-enforcement conforming to oro-pharngeal anatomy with handle; with inflatable cuff; with pilot.  4. Size 5, Size 4, Size 3	Twelve (12) Nos. Including 2 Nos of Size 5, 5 Nos of Size 4, 5 Nos. of Size 3
6	PORTABLE USG	Technical specification For Portable Color Doppler Ultrasound Unit for regional Nerve Blocks, Vascular Access in OT and ICU. Also to help USG of abdomen & Chest of sick bed ridden patient on ventilator.  1. The unit should be compact, light weight and portable. Specify weight and dimensions. Weight should not exceed 10 kg excluding card and accessories.	One (1) Nos.

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- 2. It should be suitable for vascular access (CVC placement, PICC, DVT,), Nerve blocks (Lower as well as Upper extremity), E-FAST examination, AAA Exam, small parts, applications in adults and pediatric patients and also suitable for echocardiography, interventions. Multiple preloaded applications present should be available.
- 3. The unit must have real time compound imaging for improved contrast resolution and eliminating ultrasound artifact to achieve optimum image quality on convex & linear transducers.
- 4. The unit should have automatic gain adjustment for B mode.
- 5. Scanning depth must be available up to 30 cm.
- 6. System should support broad band probes spanning with frequency range from 1-14 MHz(8+8 1 MHz)
- 7. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Continuous wave Doppler, Power (energy) Doppler should be available.
- 8. Controls for 2 D mode: Total gain,depth,d8Techincal specification For Portable Color Doppler Ultrasound Unit for

Regional Nerve Blocks, Vascular Access in OT, ICU.\*

- 9. System should have fast boot up to scanning as essential in critical and emergency situation in ICU
- 10. Unit must be sturdy, resistant to breakage & damage on fall/hit against wall or hard surface.
- 11. Controls for color Doppler: PRF, color gain position and size of ROI, steering color maps and color invert.
- 12. Controls for pleased Doppler: variable sample size from 1 to 5 mm or more, steer, PRF, baseline, gain, angle correction, spectral invert.
- 13. Cine memory on all modes.
- 14. DICOM ready system with print, save modality work list for connection to DICOM network.
- 15. Flat LCD /TFT monitor of at least 10 inches.
- 16. Alphanumeric soft key keyboard with easy access scans controls, sanitization of system keyboard must be possible to avoid cross contamination.
- 17. Onboard storage of at least 10000 Images. Storage in BMP and AVI format should be possible. Sorting of database with patient name and date should be possible.
- 18. USB port for connectivity to computer.

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		19. Unit should function with 200-240 V, 50Hz AC, 5 AMP power outlets. Specify power requirements.	
		20. Must be able to operate both on AC and inbuilt battery, Inbuilt battery pack should be self- recharging and should last at least for 2 hours when fully charged.	
		21. Transducers:-	
		A. Convex 2-5 MHZ for deep nerve access Specially Celiac, Epidural, Subgluteal Sciatic nerve & abdominal applications.	
		B. High Frequency Linear transducer 6-12 MHZ for vascular access, small parts, vascular, musculoskeletal interscalence, supraclavicular, Auxiliary,	
		C. Phased arrary 2-4 MHZ adult Echocardiography, FAST Applications.	
		D. Needle guide must be supplied with convex and linear probes.	
		22. B/W Thermal Printer should be providing for recording.	
		23. 50 Nos of Thermal Printer roll should be supplied.	
		Optional probes to be quoted with Price.	
		A. Phased array 4-8 MHz for pediatric cardiac Application with PW & CW facility.	
		b. High Frequency Linear transducer 6-13 MHz (+/- 1 MHz) or more with less imaging in Pediatric patients. Higher frequency will be preferred.	
7	MACHINE (HORIZONTAL	Double walls inside and outside made of stainless steel of 304 quality.	Two(2) Nos.
	AUTOCLAVE)	2. The complete structure including base frame, stand hinge door and all parts shall be made of 304 quality stainless steel only.	
		Radical locking system with safety mechanism shall ensure risk free & leak proof sterilization cycle.	
		4. Automatic self closing of door during operation.\	
		5. S.s steam generator.	
		6. Water level indicator to indicate water level inside the boiler.	
		7. Fully automatic pid controller to control autopurging, purging,stop, auto exhaust, temperature control facility, cycle completion alarm.	
		8. Volume must be at least 98l liters or more.	
		Manufacturer must have ISO certifications & product must be CE certified.	

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		10. Thermograph temperature recorder must be quoted optionally.	
8	LIGHT WAND	A. Adult size: 6 pcs	Eight
		B. Paediatric size : 2 pcs	(8) Nos.
9	FIBER OPTIC BRONCHOSCOPE	A. Intubating Fiberscope adult Light weight, high resolution bronchoscope with light cable. Field of view 120 degrees or more Depth of field 3 mm to 50 mm or better. Distal end diameter 5-5.5 mm approx.(Should allow 6.5 mounted easily). Bending range UP 180 degree or DOWN 130 degree working length 650 mm or more. Total length 900 mm or more channel dia 2.2 mm or more. Auto —cleavable suction valve to avoid risk of cross contamination. Telescopic eyepiece direct compatibility to CCTV system bending mechanism knob without lock. Fully immersible in disinfectant solution Leak testing facility with automatic & pressure regulated air feeding (non-pressure gauge system preferable) to be provided with a mobile Plastic Operating card and cleaning /maintenance kit including container for disinfectant solution — 1 set Power input to be 220-240 VAC,50 Hz	One
			(1) Nos.
10	IV STAND MULTIPRONG	A. IV stands with 4 arms for hanging IV bottles	Thirty (30) Nos.
11	EMERGENCY CART	Anesthesia Cart:	(eight)
		A. The anesthesia cart should be made of advanced polymer construction/ high-density polyethylene material, to ensure dent and rust free  B. The anesthesia cart should have approx. dimensions 790 mm (w) x 610mm (D0 x 1000 mm(H)  C. The anesthesia cart should have non-locking side bin /or on top.  D. The anesthesia cart should have rounded corners  E. The anesthesia cart should provision for sharp containers  F. The anesthesia cart should a over bridge with 2 hanger rails.  G. The anesthesia cart should tilt bins for over bridge.  H. The emergency crash cart should have  1 no's 3" drawers.  I. The emergency crash cart should have  2 no's 6" drawers.  J. The emergency crash cart should be European CE by notified body or USFDA certified  K. The manufacturing company should have ISO certification	8 Nos.

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12	SUCTION MACHINE	Suction machine should have following features:	Ten
		A. Oil less pump, maintenance free piston pump	(10) Nos.
		B. 2 autoclavable jars of 4-5 liters each	
		C. Jars should be autoclavable at least 134 degrees Celsius	
		D. Antistatic wheels with brakes	
		E. Footswitch with intermittent or continuous use	
		F. Electronic change over with button	
		G. Suction should be at least 60 i/minute	
		H. Maximum Vacuum 0.85 bar – 650 mmHg or more	
		Energy saving to reduce speed of motor when no suction is taking place and the machine is on	
		J. Device should be noiseless: noise should be less than 53 dB	
		K. ABS fire extinguisher housing. It does not burn with direct flame. Flame reluctant.	
		L. Price list of all accessories required after the warranty period must be quoted separately	
		M. US FDA approved	
13	FIBREOPTIC RIGID LARYNGOSCOPE	FIBREOPTIC RIGID LARYNGOSCOPE	Thirteen (13) Nos.
	EARTHGOODDI E	➤ CE Marked	
		> with 4 blades (1,2,3,4 size) Macintosh/curved	
		> Should be Fibreoptic	
1		7 Onodia Be i Micopale	
14	AIR MATTRESS WITH	Air Mattress:	Fourteen (14) Nos
14	AIR MATTRESS WITH PUMP	Air Mattress:	Fourteen (14) Nos.
14		Air Mattress:  Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.	Fourteen (14) Nos.
	PUMP	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.	
14		Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.	Twenty (20) Nos. to be excluded from this proposal list and clubbed &
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml –	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps of 0.1/ul/hr.	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps of 0.1/ul/hr.  4. Should be able to give bolus of different range.	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps of 0.1/ul/hr.  4. Should be able to give bolus of different range.  5. Selectable occlusion pressures trigger level.	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps of 0.1/ul/hr.  4. Should be able to give bolus of different range.  5. Selectable occlusion pressures trigger level.  6. Mean pressure generated <20 Psi,	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics
	PUMP SYRINGE INFUSION	Air Cushion with pump electrically driven with alternate inflation & deflation weight unit 120 Kg end flaps for secure fixing, adult size. The pump with minimal vibration and sound: light weight and compact, visual low pressure indicator.  1. Line powered as well as battery operated.  2. Should accept all standard marketed syringes from 10 ml – 100 ml.  3. Should provide flow rate range from 0.1 ml -200 ml in steps of 0.1/ul/hr.  4. Should be able to give bolus of different range.  5. Selectable occlusion pressures trigger level.  6. Mean pressure generated <20 Psi,  7. Alarm Occlusion alarm	Twenty (20) Nos. to be excluded from this proposal list and clubbed & incorporated in Pediatrics

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		11. Optional- (I) log book , (II) Near occlusion display	
		12. FDA /CE Approved.	
		CMC should include calibration of equipment every six months by	
16	TRAUMA STRETCHER CUM PATIENT	SShould have 4 sectional base with 4" mattress made of X-Ray translucent pretreated material	4
	TROLLEY STRETCHER	>4C-ray cassette that can slide through the entire stretcher (under the platform) of the trolley.	(Four) Nos.
	(4 SECTIONAL)	D-Overall dimensions should be Length 210-215 cm & Width 82-85cm	
		SWeight Capacity should be 220-23oKg	
		SFoot Pedal Controlled Hydraulic operated Trolley with foot pedal on both sides of the Trolley.	
		>••Operable in 3 Modes through lever: Brake (Available in all wheels)/Steer (Available in 2 Wheels) and Neutral.	
		SHeight to be attained: Maximum 100 cm and Minimum Height 60 cm.	
		➤••Should have backrest adjustment between o-900	
		SPneumatic step less adjustment for back section with Trendelenberg and Reverse Trend.	
		180	
		SPatient Surface should be around 195 x 66 cm	
		SProtective Corner Bumpers x 4 nos.	
		SCollapsible Side rails 125 x 4ocm	
		D-Heavy duty castors of Diameter 8"	
		SBackboard Ascending and Descending Knob o-goo	
		SShould have facility for Housing "B" type Oxygen Cylinder Holder on the base Platform	
		≻••IV Pole inserted Hole (5 Nos.)	
		SIntegrated Patient Weighing Mechanism with BMI	
		>•.Retractable fifth wheel steering.	
		SPlatform with weighing capacity up to 1oKgs for keeping of Medical Devices	
		≻••Led Light for giving Signal for Emergency Patient Alert Alarm.	
		SShould be manufactured by a well known international brand with CE marking and USFDA	

Hospital Open Tender – List of Items (Anesthesia)

17	Oxygen Regulator for B type Cylinder	Oxygen flow meter with regulator and humidifier bottle oxygen regulator -one stage, pressure pre-set good quality, MOX type, outlet pressure 55 psi, should accommodate any standard flow meter and ventilator, safe for patient use, should be quoted with standard flow meter as part the assembly, Oxygen flow meter Polycarbonate non breakable humidifier bottle. Includes floating type flow meter. Fine adjustment value with flow meter and humidifier. Flow rate 0-131/min calibrated, good quality oxygen flow meter, flow control knob. Bobbin for flow indicator, safe for patient care, back pressure compensated.	25 (Twenty Five) Nos.
18	Oxygen Regulator for D type (Double gauge) Cylinder	Double stage regulator for use on D type bulk cylinders reduces cylinder pressure and provides precise and constant delivery pressure forged brass body and housing cap Delrin cap bruising for smooth adjustment self re-seating external pressure relief value sintered bronze inlet filter stem type seat assemble for more reliable performance 2" gauzes for easy reading 1-1/4" & 2" diaphragms color coded steel gauze protectors conforms to CGA E-4 standard for pressure regulators	20 (Twenty) Nos.
19	Oxygen Regulator with Diamond Connector for Gas pipe line outlet	Oxygen Flow meter-diamond III type with humidifier bottle with adapter , nipple, humidifier bottle o adaptable to existing central pipeline oxygen outlets installed in the hospital inspection of existing system may be done before quoting to include floating type flow meter . Fine adjustment value with flow meter and humidifier. Polycarbonate non breakable humidifier bottle. for oxygen cylinders only flow rate 0-131/min calibrated good quality oxygen flow meter Bobbin for flow indicator, safe for patient care, back pressure compensated.	20 (Twenty) Nos.
20	Suction unit for Gas pipe line outlet	Wall Suction unit Compatible with existing central pipeline vacuum outlets installed in the hospital with compatible adapter, Collection bottle, regulator etc., Inspection of the existing system maymay bee done before quoting sturdy non breakable brackets to be supplied along with for attachment of Suction Unit to the wall	20 (Twenty) Nos.

<sup>\*</sup>The quantity is approximate and may vary at the time of placing orders.