

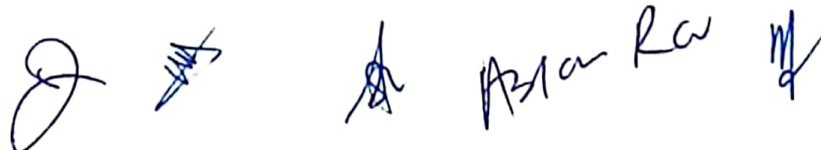
**MINUTES OF PRE BID MEETING HELD ON 25-01-2024 AT 11:00 A.M. IN THE CONFERENCE ROOM OF THE ADMIN BLOCK IN THE CHILDREN'S HOSPITAL & UNIVERSITY OF CHILD HEALTH SCIENCES LAHORE FOR THE PROCUREMENT OF ELECTRO MEDICAL EQUIPMENT, PLANT & MACHINERY & IT EQUIPMENT UNDER ADP SCHEME ESTABLISHMENT OF PEDIATRIC BURN CENTER**

Reference advertisement letter No. P.C./679/CH&UHS dated 03-01-2024 regarding the Procurement of Electro Medical Equipment, Plant & Machinery & IT under ADP Scheme Establishment of Pediatric Burn Center for the year 2023-2024 held on 25-01-2024 at 11:00 a.m. in The Children's Hospital, University of Child Health Sciences, Lahore.

- Tender Published in newspaper on 11-01-2024 under IPL No. 302 (Roznama Nawa-e-Waqt & Express Tribune) as well as on PPRA website on 11-01-2024 and ready for sale.
- As per advertised tender a Pre-Bid Meeting held on 25-01-2024 at 11:00 am (As per schedule already given in the advertisement).
- Meeting starts with the recitation of the Holy Quran. It was briefed to the Chairperson that pre-bid meeting scheduled to clarify the queries of the company in order to avoid any misunderstanding during the bidding process.

Detailed discussions made by the Pre-Bid Committee, with the representative of the firms following points were discussed and decision made as follow by the committee.

Sr. No.	Items Description	Clarification/Decision
1.	Pediatrics Ventilator	<ul style="list-style-type: none"> <li>• It was Brief to the bidders to kindly quote the Flow Analyzer for ventilator /anesthesia compatible to all brands (no need to quote price separately).</li> <li>• Dual Certificate is mandatory.</li> <li>• Remaining all are as per specified T&amp;C.</li> </ul>
2.	a. Anesthesia Workstation  b. Anesthesia Machine c. Anesthesia Pendant (Package Items)	<ul style="list-style-type: none"> <li>• Dual Certificate is mandatory.</li> <li>• Pendant should be single arm instead of dual the specifications including gas &amp; electric provision e.t.c. are as per provided specifications.</li> </ul>
3.	Operation Table Electro Hydraulic	No Changes
4.	Operation Theater light	No Changes
5.	Pulse Oximeter	<ul style="list-style-type: none"> <li>• SPO2 Sensor 2 infant ,1 adult with each Unit</li> </ul>
6&7.	a. Syringe Pump with docking station. And Infusion Pump.	<ul style="list-style-type: none"> <li>• Please read 8 docking station instead of 10 as 25 syringe pump will be procured with minimum docking capability of 3 each.</li> <li>• Item No 6 and 7 is considered as package.</li> <li>• 25 Local Stand with 5 Wheel for firm rip and load bearing for item number 6 &amp; 7.</li> </ul>
8.	Defibrillator	<ul style="list-style-type: none"> <li>• External paddles for adult and pediatric are required.</li> <li>• Pacing Defib disposable paddles Qty 3/each.</li> <li>• Local trolley is required which ensured the safety of defibrillators, with similar pattern of original trolley.</li> </ul>



Sr. No.	Items Description	Clarification/Decision
9.	a. Cardiac Monitors Invasive IBP with Capnography  b. Cardiac monitor (Non Invasive)	<ul style="list-style-type: none"> <li>NIBP hose Pipe quantity required 2.</li> <li>BP cuffs 2 Peads, 2 Adult; SPO2 leads 2 SPO2 sensors 2 Infant, 1 adult reusable.</li> <li>Read 1 Etco2 Module instead of 2.</li> <li>Monitor self with drawer to keep accessories.</li> </ul>
10.	Nebulizer	
11.	a. Central Oxygen Supply System  b. Bed Head Unit for medical gases with outlet c. Vacuum Regulator d. Oxygen Flow Meter	<ul style="list-style-type: none"> <li>Bidder Must submitted the Under taking to completely execute the project ,In case of minor variation in BOQ;</li> </ul>
12.	ECG Machine with 12 channels	Read as ECG 6 Channels. Local trolley with similar to original to ensure satisfactory.
13.	Diathermy Machine with bipolar leads Local	Additional accessories diathermy added in new Specification. Plz read total quantity 4 instead of 2 units.
14.	Magnifying Loops (Imported) 2.5 X	No Changes
15.	K wire driver	No changes
16.	Humby Skin Graft Knife	No changes
17.	Blood Warmer (Imported)	No changes
18.	Fluid Warmer	No changes
19.	Forced Air Patient Warming System	No changes
20.	Operating Micro Scope	As per request of bidder all bidder minor changes in specification has been proposed ,Please considered
21.	Hand Held Doppler	No changes
22.	Micro vascular Sets (Imported)	No changes
23.	Dialysis Unit with RO Plant	Read as CRRT (CRRT continuous renal replacement therapy)
24.	Quick sterilizer (Imported)	No changes
25.	a). Hand Surgery Sets for burn hand (Local) b). General Plastic & Burn Surgery Sets (Local) c). Dressing sets	No changes
26.	a. Complete Hydro Therapy Unit (Local) b. Autoclave (Local) c. Hand Scrub Stand (Local) d. OT Table (Local)	No changes
27.	a. Ultraviolet b. Chest Expander	No changes
28.	a. Stretcher b. Crash Cart local c. Patient Stretcher with side Bars & Oxygen Cylinder d. Patient Transfer Stretcher Trolley Cum Bed / Fowler Bed e. Fowler Bed for Burn Patients with bed side Cabinet, Attendant Bed/ Sofa and Over Bed Table	No changes

Sr. No.	Items Description	Clarification/Decision
29.	<b>Audiovisual Items</b> a. Security camera with installation and Monitor b. Audiovisual system for Theater to Committee room c. Speaker system	Specifications attached
30.	<b>IT Equipment</b> a. Computer System Core i7 (Latest Generation) 16 GB Ram 1 TB Hard disk 19" LCD with UPS (APC 650VA) with computer tables. b. Laser Printer c. Multifunctional Printer	No change
31.	Multi Media Projector	No change
32.	Shortwave Diathermy	Specifications attached
33.	Ultrasound Unit	Specifications attached
34	Direction regarding the Bid submission.	<ul style="list-style-type: none"> <li>• CDR/BG should be in Technical offer.</li> <li>• Compliance Sheet should be properly filled and proper tagging should be there so that easily verified.</li> <li>• Document should be attached in bid as per evaluation criteria.</li> <li>• Nando verification /certification is mandatory.</li> <li>• Warranties of some equipment's have been revised as per estimated prices.</li> <li>• NANDO (New Approach Notified and Designated) is mandatory.</li> <li>• A firm should require to submit its plane of PPM, as per manufacturing along with this list of machine consumable / kits as per manufacturer guidelines.</li> </ul>

Engr. Sarfraz Ahmad  
Bio Medical Engineer/  
Technical Officer

Dr. Sarfraz Ahmad  
Associate Professor  
Paediatric PM&R

Engr. Tan Haider  
Biomedical Engineer / Purchase  
Officer

Dr. Aslam Rao  
Associate Prof. of Plastic &  
Reconstructive Surgery

Mazhar Iqbal Noor  
Computer Programmer / IT Incharge

Serial No	01		
Estimated Unit Cost	11,035,200	Quantity	8
Generic Name	PEDIATRICS VENTILATOR		
Clinical Purpose	Ventilator is a machine that provides mechanical ventilation by moving breathable air into and out of the lungs, to deliver breaths to a patient who is physically unable to breathe, or breathing insufficiently.		

**TECHNICAL SPECIFICATIONS**

**VENTILATION:**

1. Microprocessor controlled powerful ventilation system mounted on trolley
2. Color touch screen 15" Minimum LCD or TFT or better.
3. Patient Range: Adult and Pediatrics.
4. Breathing classification: Pressure control, Volume control Pressure control with set Volume Breath.

**MODES OF VENTILATION:**

5. Volume control.
6. Assisted CMV.
7. Pressure control PC.
8. Assist Pressure Control.
9. CPAP.
10. SIMV with VC.
11. SIMV with PC.
12. Pressure support.
13. Bi-PAP ventilation.
14. APRV or equivalent.
15. Noninvasive ventilation (NIV) with PC, SIMV and PS.
16. High flow O2 Therapy.

**CONTROL:**

17. Set & measured parameters simultaneously.

**MEASUREMENT RANGE AND SPECIFICATION:**

18. Inspiratory tidal volume: 20 to 2000 ml or more in VC.
19. Respiratory frequency: 5 to 120bpm or better
20. SIMV breath frequency: 1 to 50 bmp or better
21. Inspiratory pressure: 10 to 80 cmH2O or better
22. Inspiratory flow: 80 L/Min or cmH2O or better.
23. I : E ratio: 1:4 / 4:1 inverse or better
24. PEEP: 3 to 30cm H2O or better.
25. FiO2 or O2 delivery: 21 to 100%
26. Monitoring parameters for set and measured value simultaneously:
27. Total breath rate.
28. Oxygen concentration FiO2 (Through Paramagnetic sensor technology or Non consumable sensor).
29. Expired minute volume.
30. I: E ratio.
31. Peak Pressure.
32. Mean pressure.
33. Lung Mechanics with pressure and volume loops.
34. Others control and functions:

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35. Back up ventilation.
36. Microprocessor gas delivery system.
37. Breathe circuit Compliance Compensation.
38. Expiratory hold or Inspiratory hold.
39. Pressure or Volume or flow trigger sensitivity.
40. Spon Triggered breaths should be indicating in pressure or volume curve.
41. Trend Data of 72 hours or more.
42. Automatic weaning method for automatically performs a spontaneous breathing trial.
43. The waveform should be displayed on ventilator's screen.
44. Expiratory valve should be Sterilize-able or autoclave-able and easily detachable.
45. Patient data, monitoring parameters data, alarms and trend data can be transfer in USB / equivalent and it should be readable and printable through laptop or PC.

**ALARMS:**

46. Apnea
47. AC power failure
48. High and low Expired minute volume
49. High and low peak air way pressure.
50. High and low breath rate
51. FiO2 variation.
52. Gas supply source failure
53. Low battery

**NEBULIZER:**

54. Built in nebulizer during ventilation.

**COMPRESSED AIR SUPPLY:**

55. The ventilator should be driven on external compressor for powerful ventilation and should have the capability to connect with central medical pipeline system of the hospital.

**HUMIDIFIER:**

56. Automatic compensation (Servo) controlled heated humidifier with temperature monitoring at air way and Humidification camber with alarm for low/ high limits with water tarp in the patient circuit.
57. Supplies by same manufacturer.

**AIR COMPRESSOR:**

58. Air compressor should be supplied by same manufacturer for better compatibility.
59. In case of central air supply pressure failure, air compressor should be automatically switch on & off.
60. Air compressor should be mounted on same ventilator trolley.

**SUPPLY REQUIREMENTS:**

61. Electric 220 V 50 Hz.
62. Built-in or integrated battery backup for main ventilator.
63. The warranty of equipment will be including batteries, all kind of sensors and flow sensor.

**WARRANTY:**

5 years comprehensive warranty.

**PPM and maintenance kits :**

Should provide the complete list and parts need to be replace during warranty period as per recommendation of manufacturer along with Documents. Mandatory to calibrate the equipment during warranty period will be the ultimate responsibility of firm to conclude the warranty.

**Flow Analyzer For Ventilator:**

Latest Analyzer as per manufacturer recommendation (Universal and compatible to use with all type of ventilators and anesthesia Machine).The price of Analyzer should be Quoted as a Package with Ventilator, separate pricing is not allowed.



**TRAINING:**

End-user Foreign attachment for one week.

Comprehensive High End Service Training of Bio-Medical Engineer at site of manufacturer for one week.

**COUNTRY OF MANUFACTURER/QUALITY CERTIFICATIONS:**

USA/EUROPE / JAPAN/Dual Certification is mandatory .



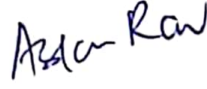


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Serial No	2A		
Estimated Unit Cost	16,409,122	Quantity	1
Generic Name	ANESTHESIA WORKSTATION (HIGH END)		
Clinical Purpose	This anesthesia workstation can be used for all category of patients (Adult, Peds & Neonate). It used by anesthesiologists to support the administration of anesthesia. The anesthesia workstation is designed to provide an accurate and continuous supply of medical gases (such as oxygen and nitrous oxide) with electronic gas mixing and mixed with anesthetic agents (such as Isoflurane & Sevoflurane) and deliver this to the patient at a safe pressure and flow. Additionally, machines incorporate a ventilator, suction unit and advance patient monitoring devices.		

**TECHNICAL SPECIFICATIONS**

1. Anesthesia work station machine to administer anesthetic agents in precise control and flow manner.
  2. The machine will equip to monitor the vital sign parameters and anesthetic agents during operation.
  3. Pendant Mounted or Floor mounted version (To be specified by the procuring agency and the end-user). Provision of 3-gases O<sub>2</sub>, N<sub>2</sub>O and Air.
  4. Machine should capable to deliver low flow and minimal flow anesthesia with fresh gas flow efficiency graph.
  5. Provision of communication port for sharing and transfer of data to HIMS or HIS through HL7 protocol.
  6. Unit shall comprise of the following components:
  7. Electronically controlled gas mixing and monitoring of anesthetic gases (O<sub>2</sub>, AIR, and N<sub>2</sub>O) both by digits as well as colored virtual tubes.
  8. Manual ventilation should be possible if the electrical system fails.  Built-in illumination system.
  9. Non-interchangeable pipeline inlets.
  10. Electronic Display of Central Pipeline & cylinder gauges for O<sub>2</sub>, N<sub>2</sub>O and AIR.
  11. Central gas or electrically driven unit.
  12. Pin index cylinder yokes for Oxygen & N<sub>2</sub>O (One each).
  13. Automatic shifting on the cylinder if the central supply of O<sub>2</sub> or N<sub>2</sub>O fails.
  14. Gas outlet and O<sub>2</sub> flush control.
  15. 1 auxiliary O<sub>2</sub> outlet (preferably electronics).
  16. Two Lockable castors.
  17. Stainless steel or fiber work surface.
  18. Absorber bag support arm.
  19. Integrated heated breathing system or ability to manage water condensation & Humidification.
  20. Drawer unit 5-6" high. (Only in floor mounted version).
  21. Scavenging system active type.
  22. Integrated or Built-in or Mounted suction with accessories to be supplied from same manufacturer which should be compatible with machine.
- ANESTHESIA VENTILATOR:**
23. Anesthesia Ventilator with minimum 15" or more LCD or TFT Touch Screen.
  24. The ventilator shall be capable of ventilating Neonates, pediatric and Adult Patients.
  25. The ventilator shall have following features as a minimum requirement:
  26. Volume Preset Time Cycled Ventilation or Volume Control.
  27. Manual and spontaneous.

28. Pressure Mode (PCV).
  29. Synchronized pressure controlled ventilation (SIMV-PC).
  30. Synchronized volume controlled ventilation (SIMV).
  31. PS with apnea back up.
  32. Breathing Mode Selection (Standby, Volume, Spontaneous and Pressure).
  33. Built in Oxygen Monitor.
  34. Inverse I:E ratio Capability.
  35. Gas Specific Input Connectors (Air or Oxygen ISO or ANSI Standards).
  36. Tidal Volume 05-1400 ml or better in any ventilation mode.
  37. Rate or Frequency 4 to 80 bpm or better.
  38. PEEP: off, 4 to 20 cmH<sub>2</sub>O or better.
  39. Inspiratory Pressure Limit.
  40. Pressure, Volume and O<sub>2</sub> curves.
  41. Spirometer loops for volume, pressure and flow.
  42. Oxygen or Electrically Driven.
  43. Power Supply 220 VAC, 50 Hz.
  44. Built-in Battery Backup (60 Minutes or more).
  45. Low or High FiO<sub>2</sub> Alarm.
  46. Numeric value or graphically representation of inspired and expired tidal volume.
  47. Incorrect Rate or Ratio alarm.
  48. Mains power failure alarm.
  49. Low battery alarm.
  50. Oxygen Sensor: Paramagnetic Technology (Non consumable).
  51. Electronic hypoxic function.
  52. The ventilator shall be supplied with complete drive hose and power cable.
  53. Capability to detect oxygen during self-test mode.
  54. Transfer of Data & log book to external storage media through USB port or equivalent printable format.
  55. Patient ventilation module or breathing system should be auto cleavable.
  56. Cardiac bypass mode or HLM.
  57. Note: Annual maintenance kits (needs to replace) will be included in the warranty period as per manufacturer's guidelines.
- VAPORIZER:**
58. Two pre calibrated Vaporizers of Isoflurane & Sevoflurane vaporizer (or by choice), temperature and flow compensated.
  59. The vaporizer should have the compatibility certificate with quoted anesthesia machine.
- MONITORING:**
60. Modular Vital sign monitor with transport module.
  61. Display size of transport module minimum 3.5" touch screen with one hours' built-in battery backup.
  62. Size of main display minimum 17" touch screen or more for monitoring of vital sign parameters of Neonates, Peads and adults.
  63. Measurement of ECG 5 or 6 leads.
  64. NIBP with re-usable single hose cuff for neonates, Peads and Adults.
  65. SpO<sub>2</sub> (Massimo Technology or Equivalent motion tolerant technology) with re-usable cable and sensors for neonates, Peads & adult
  66. HR.
  67. Temperature with nasal and skin probe.
  68. Respiration.
  69. Four Channel IBP.
  70. Trend data 72 hours or more.



Aslan Raw



71. Printer module for printing waveforms and patient data.
  72. Anesthetic Agent, CO<sub>2</sub>, O<sub>2</sub> and N<sub>2</sub>O Monitoring (With monitor or within Anesthesia Machine) along with Gas consumption and uptake data.
  73. Monitoring of xMAC or MAC value. (With monitor or with in the anesthesia machine).
  74. EtCO<sub>2</sub> main or side stream (Complete with all sensors probes, reusable).
  75. Provision of communication port for sharing and transfer of data to HIMS or HIS through HL7 protocol.
  76. 220V, 50 Hz operated.
  77. Built-in or Integrated battery backup or online pure sine wave UPS with dry batteries for at least 60 minutes.
  78. **Note:** Vital sign Monitor must be supplied by the same manufacturer and shall capable to interface with machine.
  79. The warranty of equipment will be including batteries, all kinds of filters and flow sensor.
- ACCESSORIES OF ANESTHESIA VENTILATOR:**
80. Power outlet with 3 or 4 socket outlets to connect the auxiliary equipment.
  81. CO<sub>2</sub> absorber 700 – 1,500 gm or better complete with valve for bag or ventilator.
  82. Re-Usable Silicon Autoclave able breathing circuit (Adult, Pediatric and Infant 01 each)
  83. Mounts and Y-piece.
  84. Hinge arm for breathing circuit
  85. Additional breathing hose and connector with 01 adult & 01 pediatric and infant bellows. (Only provide with bellow based machine) or Universal bellow
  86. 2 x O<sub>2</sub> and 2 x N<sub>2</sub>O pin index cylinders (Should be provided locally along with test certificate from approved Gas supplier).
  87. Breathing bags 0.5, 1.0, 1.5, 2 & 3 L
  88. Water-lock or water-trap (QTY-05).
  89. Sample lines (QTY-10).
- MONITORING ACCESSORIES:**
90. 2 X NIBP Cuffs for Adult, infant and Peads (one each)
  91. 2 X Spo<sub>2</sub> probes for Adult, infant & Peads (one each)
  92. 2 X Temperature probes (Nasal & Skin).
  93. 2 X ECG Leads.
  94. 2X Four Channel IBP leads.
  95. EtCO<sub>2</sub> sensor or module.
  96. 4 x printing paper roll.
- OPTIONAL ITEMS**
97. NIRS (Near Infra-Red Spectroscopy unit for Cerebral Pulse Oximetry for pediatric patients.
  98. Complete with main unit with monitor and sensors including disposable head sensor or probe (Qty. 50 Nos.)
  99. 12 lead ECG option.
  100. NMT Neuro muscular transmission.
  101. BIS Monitoring.
  102. Cardiac Output module or monitor.
  103. Patient Data Management: o Remote view of patient data through web-based application.
  104. Patient data should be managed as pdf reports.
  105. Online pure sine wave UPS backup of 60 minutes for complete workstation.
  106. The warranty of equipment will be including (System & UPS batteries), all kind of sensors and flow sensor.

**WARRANTY:**

5 years comprehensive warranty.

Aslam Rana

**PPM and maintenance kits :**

Should provide the complete list and parts need to be replace during warranty period as per recommendation of manufacturer along with Documents. Mandatory to calibrate the equipment during warranty period will be the ultimate responsibility of firm to conclude the warranty.

**COUNTRY OF MANUFACTURER/QUALITY CERTIFICATIONS:**

USA/ EUROPE / JAPAN/Dual Certification is mandatory.

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Serial No	2B		
Estimated Unit Cost	11,035,200	Quantity	01
Generic Name	ANESTHESIA WORKSTATION (LOW END)		
Clinical Purpose	The anesthesia workstation is used by anesthesiologists to support the administration of anesthesia. The anesthesia machine is designed to provide an accurate and continuous supply of medical gases (such as oxygen and nitrous oxide), mixed with an accurate concentration of anesthetic agents (such as Iso and Sevo), and deliver this to the patient at a safe pressure and Flow. Additionally, machines incorporate a ventilator and patient monitoring devices.		

**TECHNICAL SPECIFICATIONS**

1. Mobile type (To be specified by the procuring agency and the end-user).
  2. Anesthesia machine to administer anesthetic agents in precise control and flow manner for Adult and pediatric patients.
  3. Provision of 3-gases O2, N2O and Air.
  4. It must comprise of the following components
  5. Non-interchangeable pipeline inlets.
  6. Pipeline & cylinder gauges for O2, N2O and Air.
  7. Central gas or electrically driven unit.
  8. Pin index cylinder yokes for Oxygen & N2O (One each), as backup.
  9. Gas outlet and O2 flush control.
  10. 1 auxiliary O2 outlet.
  11. Two Lockable castors or central brake.
  12. Stainless steel or fiber work surface.
  13. Absorber bag support arm.
  14. Three gas flow meters for precise control and monitoring of gases.
  15. Drawer unit 4-6" high (Only for trolley version machine).
  16. Scavenging system Passive or Active type.
- ANESTHESIA VENTILATOR:**
17. Anesthesia Ventilator with minimum 10" or more color LCD or TFT Screen.
  18. The ventilator shall be capable of ventilating adult and pediatric patients.
  19. The ventilator shall have following features as a minimum requirement:
  20. Volume Preset Time Cycled Ventilation or Volume Control.
  21. Pressure Controlled Ventilation.
  22. SIMV Mode
  23. Pressure Support
  24. Breathing Mode Selection (Standby, Volume, Spontaneous and Pressure).
  25. Built in Oxygen Monitoring.
  26. Inverse I: E ratio Capability.
  27. Gas Specific Input Connectors (Air or Oxygen ISO or ANSI Standards).
  28. Tidal Volume from 20ml to 1400ml or better in any ventilation mode.
  29. Rate or Frequency 4 to 60 bpm or better.
  30. PEEP (off, 4 to 20 cm H2O) or better.
  31. Inspiratory Pressure Limit.
  32. Power Supply 220 VAC, 50 Hz.
  33. Built-in Battery Backup (60 Minutes or more).
  34. Low or High FiO2 Alarm.

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35. Incorrect Rate or Ratio alarm.
36. Mains Failure alarm.
37. Low battery alarm advance indication.
38. Hypoxic device function.
39. Spirometry (Loops) or curves of Pressure and Volume.
40. High and Low pressure alarm.
41. The ventilator shall be supplied with complete drive hose and power cable.
42. Note: Annual maintenance kit (needs to replace) will be included in the warranty period as per manufacturer's guidelines.
43. The warranty of equipment will be including batteries, oxygen sensor and flow sensor.

**VAPORIZER:**

44. Two pre calibrated Vaporizers of Isoflurane & Sevoflurane vaporizer, temperature and flow compensated.
45. Manufacturer should provide compatibility certificate of machine and vaporizers.

**MONITORING:**

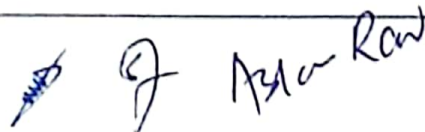
46. Vital sign monitor.
47. Size of minimum 12" or more for display of vital sign parameters.
48. Measurement of ECG 3 or 5 leads.
49. NIBP, SPO2 and HR measurements.
50. Temperature with nasal probe.
51. Respiration.
52. EtCO2 (main or side stream).
53. Dual Channel IBP.
54. 220V, 50 Hz operated.
55. Printer for printing waveform and patient data.
56. Trend data: at-least 72 hours.
57. Built-in Battery backup two hours.
58. Note: Vital sign Monitor must be supplied by the same manufacturer and shall capable to interface with machine.

**ANESTHESIA ACCESSORIES:**

59. Power outlet with 2 or 3 or 4 socket outlets to connect the auxiliary equipment.
60. CO2 absorber 800 – 1,500 gm or better complete with valve for bag or ventilator.
61. Breathing bags.
62. Hinge arm for patient circuit.
63. Re-Usable Silicon Autoclave able breathing circuit (Adult and Peads 01 each)
64. Mounts or Y-piece.
65. Additional breathing hose and connector with 01 adult & 01 pediatric bellows. (Only provide with bellow based machine) Or Universal bellow.
66. 2 x O2 and 2 x N2O pin index cylinders (Should be provided locally along with test certificate from approved Gas supplier).

**MONITORING ACCESSORIES:**

67. 2 X NIBP Cuffs for Adult and Peads (Two each)
68. 2 X SPO2 probes for Adult & Peads (Two each)
69. 2 X Temperature probes.
70. 2X IBP Leads.
71. 2 X ECG Leads.
72. 2X ECG electrodes.
73. EtCO2 Sensor or module.
74. 4 x printing papers roll.

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**WARRANTY:**

5 years comprehensive warranty including all parts and consumables

**PPM and maintenance kits :**

Should provide the complete list and parts need to be replace during warranty period as per recommendation of manufacturer along with Documents. Mandatory to calibrate the equipment during warranty period will be the ultimate responsibility of firm to conclude the warranty.

**COUNTRY OF MANUFACTURER/QUALITY CERTIFICATIONS:**




USA/ EUROPE / JAPAN/Dual Certification is mandatory .

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<b>Serial No</b>	<b>2C</b>		
<b>Estimated Unit Cost</b>	2,207,040	<b>Quantity</b>	02
<b>Generic Name</b>	<b>CEILING MOUNTED ANESTHESIA PENDANT</b>		
<b>Clinical Purpose</b>	Anesthesia pendant is applied in operating rooms. It is used to set up anesthesia working area, integrating anesthesia machine. It provides convenience of anesthesia operation to the greatest extent.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Ceiling mounted Anesthesia Pendant system should be powder coated, hygienically smooth surface, impact and disinfectant resistant.</li> <li>2. Shelves – 3 or 4 pcs</li> <li>3. Drawer – 1 or 2 Pcs</li> <li>4. No. of Arms: 02</li> <li>5. Length of first Arm 1000 mm</li> <li>6. Length of second arm 750-800 mm</li> <li>7. Max. Degrees of Rotation at each arm 300° or better(max)</li> <li>8. Loading capacity: 180 kg – 200 kg or better (Motorized Uplifting arm to lift the anesthesia machine as per compatibility)</li> <li>9. Braking system: Electromagnetic or Electric or pneumatic brakes to control horizontal movement. • Electrical Sockets British Standard 16 to 20 Pcs</li> <li>10. LAN Data ports RJ45 or equivalent for PC – 2 Pc</li> <li>11. Oxygen Outlet: 2Pcs</li> <li>12. Medical Air 4 Bar 2 pcs</li> <li>13. Vacuum Outlet: 2 pcs</li> <li>14. Nitrous Oxide Outlet 2 pcs</li> <li>15. AGSS Out let 2 PCS (Active AGSS)</li> <li>16. I.V Pole- 1 PC</li> <li>17. Basket for Accessories.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts and consumables			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ EUROPE / JAPAN			



Serial No	3		
Estimated Unit Cost	5,000,000	Quantity	02
Generic Name	<b>ELECTRO-HYDRAULIC/ELECTRO-MECHANICAL OPERATION TABLE</b>		
Clinical Purpose	Operating Tables used to conduct the different kind of surgical interventions of patients, the dedicated tables provide all the positions required by the surgeon		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Weight bearing capacity of 250kg or more.</li> <li>2. 5 Sectional operation Table with two leg section.</li> <li>3. Table top equipped with radiolucent material.</li> <li>4. The mattress covers with washable, antistatic material.</li> <li>5. X-ray Cassette holder for X-Ray and C-Arm facility Sliding table top at least 250mm or more</li> <li>6. Electric Height adjustment: 730 to 1000 mm or more.</li> <li>7. Electric Trendelenburg and Reverse Trendelenburg: 25° degree and -25° or better.</li> <li>8. Electric lateral tilt: 30° degree and -30° degree or better.</li> <li>9. Manual or electric backrest adjustment: 70° degree and -15° degree or better. (Both are acceptable)</li> <li>10. Manual leg section adjustment: 20° degree and -90° or better. 220-230 V, 50 Hz.</li> <li>11. Hand control unit. Override panel in the column or Wireless remote for back up control in emergency cases.</li> <li>12. Battery backup control of table in case of main power failure.</li> </ol> <p><b>ACCESSORIES:</b></p> <ol style="list-style-type: none"> <li>13. Pair of Arm rest with clamp</li> <li>14. Anesthesia screen</li> <li>15. Large width body strap</li> <li>16. Adjustable bottle holder rod</li> <li>17. Shoulder support</li> <li>18. Pair of Knee Crutches.</li> <li>19. Lateral Support</li> <li>20. Note: PPM kits for 5 year will be provided as per manufacturer Recommendation.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts and consumables			

**PPM and maintenance kits :**

Should provide the complete list of part needs to be replace during warranty on as per recommendation of manufacturer along with Documents.

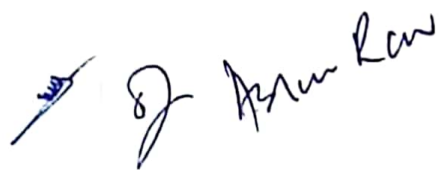
**COUNTRY OF MANUFACTURER:**

USA/ EUROPE / JAPAN



<b>Serial No</b>	4		
<b>Estimated Unit Cost</b>	3,000,000	<b>Quantity</b>	02
<b>Generic Name</b>	<b>CEILING OT LIGHT DOUBLE HEAD</b>		
<b>Clinical Purpose</b>	OT Light is a medical device intended to assist medical personnel during a surgical procedure by illuminating a local area or cavity of the patient.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. LED shadow less operation theatre ceiling light, hermetically sealed dust proof.</li> <li>2. Adjustable light intensity 160000 LUX at 1 meter distance.</li> <li>3. Satellite combination of 160000 LUX at 1 meter.</li> <li>4. Color temperature 4000°-4500° Kelvin.</li> <li>5. Electronic control panel for light Parameter's adjustment.</li> <li>6. Color rendition index of 96 or more.</li> <li>7. LED life 50,000 hours or better.</li> <li>8. Autoclavable handles.</li> <li>9. Operating Voltage 220V, 50Hz.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts and consumables			
<b><u>PPM and maintenance:</u></b>			
Annual PMM and check of light intensity and replacement of LED after 50,000 Hr is the responsibility of firm during warranty period.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ EUROPE / JAPAN			

 *Asim Khan*

<b>Serial No</b>	5		
<b>Estimated Unit Cost</b>	336300/-	<b>Quantity</b>	20
<b>Generic Name</b>	<b>Pulse Oximeter Bed side</b>		
<b>Clinical Purpose</b>	A pulse Oximeter is a medical device that indirectly monitors the oxygen saturation of a patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photo Plethysmogram.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Non-invasive measurement of oxygen saturation and pulse rate with LCD screen. Desktop unit.</li> <li>2. Display of oxygen saturation and pulse rate.</li> <li>3. Oxygen saturation measurement range from 0 -100%.</li> <li>4. Pulse strength perfusion indication</li> <li>5. Capability of Plethysmography.</li> <li>6. Pulse rate measurement from 30-250 bpm.</li> <li>7. Visual and audible indication of alarms.</li> <li>8. Built-in battery backup 05 hours.</li> <li>9. High and low alarms settings. Power of 220 V, 50 Hz.</li> </ol> <p><b>Accessories:</b> Reusable Pediatric SPO2 probe with sensor Quantity-04. (Infant 2 ,Adult 1)Reusable</p>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ EUROPE / JAPAN			

Serial No	6		
Estimated Unit Cost	454,677	Quantity	25 Syringe Pump + +08 Docking Station
Generic Name	Syringe Pump with docking station (item 6 and 7 as package)		
Clinical Purpose	Syringe pumps will be capable to deliver fluids and medicines into a patient body in controlled manner (Time, Rate & Volume) through various sizes of Disposable Syringes.		

**TECHNICAL SPECIFICATIONS**

1. Syringe pump for fluid administration.
2. Flow Rates: 0.1 -900 ml/hr. (Approx.)
3. Bolus rate: 0.1 to 1200 / hr.
4. LCD display of set parameters
5. Universal Syringe acceptance capability for disposable, Plastic, Size, 5, 10, 20, 50, 60 ml  
Drive Accuracy. ±3%
6. Display of drug name, Infusion rate, infused volume and volume to be infused.
7. Set Automatic adaptation of controls according to syringe /infusion set.
8. Quick feed/rapid infusion facility/bolus
9. KVO Functions (Keep vein open)
10. Data event log
11. Safety alarm & indicator: Occlusion pressure alarm, end of infusion, loose syringe alarm, low battery, and technical malfunction alarm.
12. Rechargeable battery and mains operated 220V, 50Hz
13. Battery backup 3 hours or more.

**ACCESSORIES**

System should be supplied with complete accessories.

15 Local Stand with 5 Wheel for firm grip and load bearing

Compatible docking stations (For minimum 03 syringe pumps Qty+08)

**WARRANTY:**

5 years comprehensive warranty including all parts and consumables

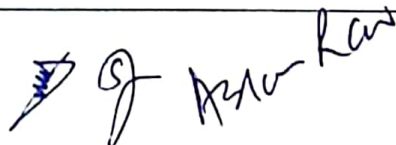
**COUNTRY OF MANUFACTURER:**

USA/ EUROPE / JAPAN

Serial No	7		
Estimated Unit Cost	169,500	Quantity	21
Generic Name	Infusion Pump,(item 6 and 7 as package)		
Clinical Purpose	Infusion pumps will be capable to deliver fluids into a patient body in controlled manner (Time, Rate & Volume). Infusion pumps are designed mainly for stationary use at a patient's bedside.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Operates on any brand of infusion set.</li> <li>2. Automatic control of infusion rate independent of venous or arterial pressure</li> <li>3. Bolus function.</li> <li>4. Air bubble detector.</li> <li>5. Automatic pressure release after occlusion.</li> <li>6. Automatic switchover to keep-vein-open (KVO) rate of 1.0 ml/hr.</li> <li>7. Compatible with commonly available Infusion sets.</li> <li>8. Light indicates main or battery operation</li> <li>9. Detects a "no flow" situation i.e. empty container</li> </ol> <p><b>DISPLAY:</b></p> <ol style="list-style-type: none"> <li>10. LED/LCD digital display which indicates flow rate</li> <li>11. Infused volume</li> <li>12. Volume to be infused</li> <li>13. Volume balance</li> <li>14. Infusion time</li> <li>15. Remaining time</li> <li>16. Battery capacity</li> <li>17. Occlusion level</li> </ol> <p><b>INFUSION RATE:</b></p> <ol style="list-style-type: none"> <li>18. 0.1-999.9 ml/hr in 1 ml increments</li> </ol> <p><b>INFUSION TIME:</b></p> <ol style="list-style-type: none"> <li>19. 99 to 95 hours</li> </ol> <p><b>AUTOMATIC RATE CALCULATION:</b></p> <ol style="list-style-type: none"> <li>20. On total volume + time.</li> </ol> <p><b>ACCESSORIES</b></p> <ol style="list-style-type: none"> <li>21. System should be supplied with complete accessories.</li> <li>22. IV pole 5 wheels with firm grip and stability of Pump.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts and consumables			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ EUROPE / JAPAN			

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Serial No	8		
Estimated Unit Cost	1,614,000	Quantity	3
Generic Name	DEFIBRILLATOR		
Clinical Purpose	Defibrillators are devices that restore a normal heartbeat by sending an electric pulse or shock to the heart.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Biphasic Transthoracic (External) Defibrillator.</li> <li>2. LCD color display with Screen Size of approx. 5 inches or better</li> <li>3. Synchronized output with ECG.</li> <li>4. For External Defibrillation Energy Selection &amp; Delivery on Control Panel and / Or External Paddles.</li> <li>5. For Internal Defibrillation Energy Selection on Control Panel and / Or Internal Paddles and Delivery must be on Internal Paddles.</li> <li>6. Charging Indicator</li> <li>7. The energy range should be adjustable for Neonates, Paeds and Adults up to 200 Joules or better</li> <li>8. Charging Time for full energy should be less than 6 – 7 seconds</li> <li>9. Display of HR, ECG through paddles and Lead I, II &amp; III patient cable</li> <li>10. Built-in recorder for printing of full summery on standard 50 mm paper</li> <li>11. Alarms for High and low Heart rate, low battery warning</li> <li>12. Auto Tester / Self-Check</li> <li>13. External Paddles (Adult and Paeds)</li> <li>14. AED Facility with Cable</li> <li>15. Pacing Facility Other Parameters:</li> <li>16. Operating Requirement: AC 220 V &amp; 50 Hz</li> <li>17. Built-in Rechargeable battery with charger for minimum 100 shocks at maximum energy Accessories:</li> <li>18. Complete with all Standard Accessories.</li> <li>19. External Pedal (Peads and Adult).</li> <li>20. <del>Original</del> Local Trolley with antistatic castors / wheels and all precautionary measures applicable.</li> </ol> <p><b>Optional Mandatory To Quote:</b></p> <ol style="list-style-type: none"> <li>21. EtCO2</li> <li>22. SpO2</li> <li>23. NIBP</li> <li>24. Pacing / Defibrillation Pads (Reusable 1 / Disposables 3 )</li> <li>25. External paddles for adult and pediatric are required.</li> <li>26. Pacing Defib disposable paddles Qty 3/each.</li> <li>27. Local trolley is required which ensured the safety of defibrillators</li> </ol>			
<b>WARRANTY:</b>			
5 years comprehensive warranty including all parts and consumables			
<b>COUNTRY OF MANUFACTURER:</b>			
USA/ EUROPE / JAPAN			

 J. Aslam Khan

Serial No	9		
Estimated Cost	1,500,000	Quantity	3+18
Generic Name	INVASIVE &NON INVASIVE MONITOR		
Clinical Purpose	In CCUs, ICUs, operating rooms, and pre and post – operative wards, a monitor that allows for the monitoring and management of patients' Hemodynamics data, such as Cardiac Rhythm, Saturation, Waveforms, Temperature, Non – Invasive Blood Pressure (NIBP), and Invasive Blood Pressure (IBP)[for Invasive monitors]		

**TECHNICAL SPECIFICATIONS**

1. Bedside Monitor to display vital signs and other parameter for Adult and Paeds
2. Screen Size: At least 12" diagonal (Touch Operated) or better with non-fade LCD / TFT LCD / LED color display.
3. Electro-Surgical Interference Suppression / Protection
4. Defibrillator Protection
5. Freeze and Cascade Facility
6. Waveform: Six wave forms or more
7. Waveform Traces Speed: 25 & 50 mm / sec Parameters:
8. ECG
9. Numeric: Heart Rate
10. Real Time, and freeze ECG Trace Non-Invasive Blood Pressure (NIBP):
11. Method: Oscillometric Principle
12. Numeric: Systolic, Diastolic, and Mean Pressure
13. Selectable auto inflate interval settings
14. Rising Cuff / Continuous Pressure Display
15. Invasive Blood Pressure (IBP)(Quote for 3 systems invasive Monitor)
16. IBP Two Channel.(Quote for 3 systems invasive Monitor)
17. Side Stream / Mainstream Capnography (EtCO2) (Quote for 3 systems invasive Monitor)
- Temperature:**
18. Numeric: Temperature selectable in °C / °F Pulse Oximetry:
19. Numeric: 0 – 100% oxygen saturation measuring range
20. Waveform-Plethysmograph Pulse with Pulse Strength Indication Arrhythmia Analysis:
21. Arrhythmia Analysis and ST Analysis Respiration:
22. Breath Rate display and settable apnea alarms
23. Sweep Speed: 6.25, 12.5 mm / sec or better Other Features:
24. Trend Data: Graphical / Tabular with at-least 48 hours' back-up or better
- Alarms:**
25. High & Low (settable) on all parameters
26. Visual and audible indication of alarms Other Parameter:
27. Operating Requirement: AC 220 V & 50 Hz
28. Built-in rechargeable battery for fully operational back-up for at least 1.5 – 2 hours or online pure Sinewave UPS (imported) with fully operational back-up for at least 2 hours or better (Batteries included in warranty):
- Communication**
28. Capability to interface with LAN / WLAN for data transfer.

*J. Anuram*

**Accessories for each Units.**

BP cuff (1 Adult ,2 Peds)

2X NIBP CUFFS

3X SPO<sub>2</sub> probe with Sensor.(2 INFANT ,1 ADULT)

2X IBP Leads

5X IBP transducer (Only for Invasive Monitor)

~~2X~~ EtCO<sub>2</sub>(Only for Invasive Monitor 1x)

**Note :** Same specification will be used for Non Invasive Monitor by Excluding point (15,16 & 17) .It is mandatory to quote technical offer of both monitors separately in a single bid, and financial offer as well Competition will be based on collective prices.

**WARRANTY:**

5 years comprehensive warranty including all parts and consumables

**COUNTRY OF MANUFACTURER:**

USA /EUROPE/JAPAN.

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Adnan Khan

2025

Item no. 10

SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS	
Clinical Specialty	PEDIATRIC PLASTIC SURGERY
Generic Name	Nebulizer <i>Qty. 11 Nos.</i>
Clinical Purpose	A nebulizer is a drug delivery device used to administer medication in the form of a mist inhaled into the lungs. The technology inside an ultrasonic wave nebulizer is to have an electronic oscillator generate a high frequency ultrasonic wave, which causes the mechanical vibration of a piezoelectric element. This vibrating element is in contact with a liquid reservoir and its high frequency vibration is sufficient to produce a vapor mist.
TECHNICAL SPECIFICATIONS	
<p>For nebulization of respiratory tracts.</p> <ul style="list-style-type: none"> <li>▲ Hospital grade for continuous operation.</li> <li>▲ Ultrasonically generated uniform and highly dense particles of 0.5-5 microns size.</li> <li>▲ Approximately 65-70% of particles of less than 4 micron size.</li> <li>▲ Autoclave able delivery pipes.</li> <li>▲ Air flow of 10 L/min.</li> <li>▲ Aerosol heating facility</li> <li>▲ Quiet operation with noise level of less than 40dB.</li> <li>▲ Nebulizing time setting from 0-30 min.</li> <li>▲ Medication cup capacity: 150 ml.</li> <li>▲ Power of 220 Volts / 50 Hz.</li> <li>▲ One extra Flexible arm/ delivery pipe/masks (all sizes).</li> <li>▲ Complete with bacteria filter</li> </ul>	
Accessories:	
Warranty : One Year Standard Warranty	

*Waseem Humayoun*

DR M ASLAM RAI  
 ASSISTANT PROFESSOR AND  
 HEAD OF DEPARTMENT OF PLASTIC  
 SURGERY & RECONSTRUCTIVE SURGERY  
 THE CHILDREN'S HOSPITAL, LAHORE



DR. WASEEM HUMAYOUN  
 MBBS, MPPS, MR (Plastic)  
 Assistant Professor  
 Plastic & Reconstructive Surgery  
 The Children's Hospital, Lahore

*M. Aslam Rai*  
 14/1/24








Serial No	11 (A,B,C,D)		
Estimated Cost	15,247,286	Quantity	As Per BOQ
Generic Name	MEDICAL GAS PIPELINE SYSTEM		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<p>The Medical gas Pipe line should strictly comply with the international standards and configuration for requirements of HTM 2022 or latest, however, ISO 7396-1 or latest can also be used. It would be the choice of the bidder for adherence to any standard which would be mentioned in the bid. The objectives are to ensure the following:</p> <ul style="list-style-type: none"> <li>a) Non-Interchangeability Between Different Pipeline Systems By Design;</li> <li>b) Continuous Supply Of Gases And Vacuum at Specified Pressures By Providing Appropriate Sources;</li> <li>c) Required Flow Rates In Particular Areas/ Outlets;</li> <li>d) Use Of Suitable Materials;</li> <li>e) Cleanliness Of Components;</li> <li>f) Correct Installation;</li> <li>g) Provision Of Monitoring, Controls and alarm at single site.</li> <li>h) Correct Marking Of The Pipeline System;</li> <li>i) Following Of Testing And Commissioning Protocols;</li> <li>j) Maintaining The Purity Of The Gases Delivered By The Pipeline System;</li> <li>k) Correct Operational Management.</li> </ul> <p><b>BOQ:</b> List Attached.</p>			
<b>WARRANTY:</b>			
3 years comprehensive warranty including all parts and consumables			
<b>COUNTRY OF MANUFACTURER:</b>			
USA /EUROPE/JAPAN.			

 *Asim Khan*

<b>Serial No</b>	11 (A,B,C,D)		
<b>Estimated Unit Cost</b>	15,247,286	<b>Quantity</b>	22
<b>Generic Name</b>	BED HEAD UNIT FOR WARD		
<b>Clinical Purpose</b>	To provide a comprehensive solution of medical gasses and power supply at on panel.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Each unit consists of: 1,000 mm and above</li> <li>2. Horizontal type</li> <li>3. Built in over bed Light with ON/OFF switch.</li> <li>4. Built in reading Light, with ON/OFF switch.</li> <li>5. Provision for Nurse Call/ Alert Button</li> <li>6. Gas outlets (1x Vacuum, 2x Oxygen) with complete fitted point should from USA, EU and Japan.</li> </ol> <p><b><u>Electrical provisions.</u></b></p> <ol style="list-style-type: none"> <li>7. Electrical sockets: 4 Nos. of Multi Pin Plug.</li> <li>8. All wiring conforms to standards, ground/earth.</li> <li>9. Electrical &amp; Gas Pipes should be separate as per standard.</li> <li>10. Base should be 2 mm or more.</li> </ol>			
<b><u>WARRANTY:</u></b>			
3 years comprehensive warranty including all parts and consumables			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
Local			




Serial No	11 (A,B,C,D)		
Estimated Unit Cost	15,247,286	Quantity	8
Generic Name	BED HEAD UNIT FOR ICU		
Clinical Purpose	To provide a comprehensive solution of medical gasses and power supply at on panel.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Each unit consists of: 1,500 mm and above</li> <li>2. Horizontal type with railing</li> <li>3. Built in over bed Light with ON/OFF switch</li> <li>4. Built in reading Light with ON/OFF switch.</li> <li>5. Provision for Nurse Call/ Alert Button</li> <li>6. Gas outlets (1x Vacuum, 1x Air, 3x Oxygen complete fitted), with complete fitted point should from (USA, EU and Japan).</li> <li style="padding-left: 20px;"><b>Electrical provisions</b></li> <li>7. Electrical sockets: 6 Nos. of Multi Pin Plug and 2 Nos. of German standard.</li> <li>8. All wiring conforms to standards, ground/earth.</li> <li>9. Electrical &amp; Gas Pipes should be separate as per standard.</li> <li>10. Base should be 2 mm or more.</li> </ol>			
<b><u>WARRANTY:</u></b>			
3 years comprehensive warranty including all parts and consumables			
<b><u>ORIGIN:</u></b>			
<u>LOCAL.</u>			

Serial No	11 (A,B,C,D)		
Estimated Cost	15,247,286	Quantity	30 +30
Generic Name	VACUME REGULATOR & OXYGEN FLOW METER		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<p><b>VACUUM REGULATOR WITH GAUGE / DIGITAL</b></p> <ol style="list-style-type: none"> <li>1. The Vacuum Controller should be connected to Wall Source of Vacuum using direct probe or rail mounting System.</li> <li>2. Vacuum Levels 0 to 750 mm Hg complete with 1 Liter suction Bottles, Unbreakable/ Autoclave able.</li> <li>3. Complete with overflow safety system.</li> </ol> <p><b>OXYGEN FLOW METER</b></p> <ol style="list-style-type: none"> <li>4. Wall mounted oxygen flow meter</li> <li>5. Flow range: 1-15 LPM</li> <li>6. Minimum flow rate starting at 1 LPM</li> <li>7. Complete with unbreakable and autoclavable polycarbonate humidifier bottle</li> </ol>			
<b><u>WARRANTY:</u></b>			
1 year comprehensive warranty including all parts and consumables			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA /EUROPE/JAPAN.			

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## Burn Canter Children Hospital Lahore

### BOQ

Fourth Floor																																
No	ROOM	No. OF BEDS	Pendants		DHU		NO OF TERMINAL UNITS					VALVE BOXES			Alarm Pannel	O2				N2O		MA4				VAC				AGSS		
			Anesthesia	Surgeon	15000MM	10000MM	O2	N2O	MA4	VAC	AGSS(P)	25	35	45	AAP	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	
	Pediatric Ward	7				7	14							1			120	140											170	70	0	
	Ward hydro room	1					1							1			50	10										50	20	0		
	Ward hydro room	2				2	2							1			40	20										40	20	0		
	Ward	8				8	16							1			120	160										170	80	0		
	Burn ICU	8			8		16		16	8				1			150	160				150	160				150	80	0			
	ICU hydro room	1					2		1	2			1				60	20									60	20	0			
	Burn HDU	5				5	10		5	5				1			100	100				100	50				100	50	0			
	HDU hydro room	1					1			1							40	10									40	10	0			
	Burn OT	0					0	0	0	0	0			0				0										0	0	0		
	Pre OP	2					2		0	2							70	20				70	0				70	20	0			
	Post OP	3					3		3	3							70	30				70	30				70	30	0			
	Riser Valve /PIPE														100			0			100		0	100				0	0	0		
	Mainline piping															400		0				400		0		200	200		0			
	<b>Total</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>22</b>	<b>67</b>	<b>0</b>	<b>25</b>	<b>40</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>100</b>	<b>400</b>	<b>820</b>	<b>670</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>400</b>	<b>390</b>	<b>250</b>	<b>100</b>	<b>200</b>	<b>200</b>	<b>820</b>	<b>400</b>	<b>0</b>	<b>0</b>

#### LEGEND



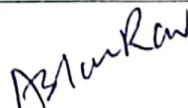
1	DHU	BED HEAD UNIT
2	AVSU	AREA VALVE SERVICE UNIT
3	AAP	AREA ALARM PANNEL
4	O2	OXYGEN
5	N2O	NITROUS OXIDE
6	MA4	MEDICAL AIR 4 BAR
7	AGSS	Anesthesia Gas Scavanging System
8	SA7	SURGICAL AIR 7 BAR
9	VAC	VACUUM
10	LPM	LITRE PER MINUTE
11		THREE GASSES

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<b>Serial No</b>	12		
<b>Estimated Unit Cost</b>	403560	<b>Quantity</b>	1
<b>Generic Name</b>	ECG		
<b>Clinical Purpose</b>	Electrocardiography (ECG) is the process of recording the electrical activity of the heart over a period using electrodes placed on a patient's body.		
<b>TECHNICAL SPECIFICATIONS</b>			
<p>1. Six Channels ECG on at least 3 – 5 inches LCD display or better                  2. Display of six channel ECG simultaneously                  3. Manual and Automatic Operation                  4. Variable Gain: 1/2, 1, 2 cm / mV                  5. Interpretation Software both Adult and Paeds                  6. Recording Trace speed: 10 / 12.5, 25 and 50 mm / sec                  7. Muscle artifact and AC (50 Hz) interference filters                  8. Defibrillator Protection                  9. Built-in battery operation with 60 mins standby backup or better / Can acquire and prints 15 ECGs without recharging                  10. Paper Size: 100 – 110 mm or larger                  11. Noise Filter and Baseline Correction                  12. Capability to interface with LAN / WLAN for data transfer                  13. Thermal Recorder for printing out of Six Channels simultaneously                  14. Paper Rolls / Z Folds / Recording Papers: Quantity = 10 (Each Roll Length minimum 20 meters) 15. Operating Requirement: AC 220 V &amp; 50 Hz 16. Securing / fixation to the mobile Cart by strap or other means must be provided</p> <p><b>Accessories:</b>                  Complete with all Standard Accessories, including patient cables for Pediatrics                  Reusable electrode, limb electrode and leads 2 sets.                  Disposable sticking electrodes QTY 100                  Operational &amp; Service Manual                  Dedicated ECG Mobile Cart (Local )</p>			
<b>WARRANTY:</b>			
3 Years comprehensive warranty including all parts and consumables.			
<b>COUNTRY OF MANUFACTURER:</b>			
USA/EUROPE/JAPAN			



Serial No	13		
Estimated Unit Cost	1883280	Quantity	2
Generic Name	<b>HIGH END ELECTROSURGICAL UNIT</b>		
Clinical Purpose	Electrosurgical Machine is used to cut, coagulate and desiccate the biological tissues.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Microprocessor based electrosurgical <b>4 units</b> for normal and under water cutting usages.</li> <li>2. Automatic self-test function.</li> <li>3. Operation in radio frequency range.</li> <li>4. Controls for cutting, coagulation, spray and blends.</li> <li>5. Monopolar cutting power of 350 watts or more with change of 05 watts or less increment.</li> <li>6. Bipolar cutting power of 120 watts or more.</li> <li>7. Mono polar coagulation power of 120 Watts or more.</li> <li>8. Bipolar coagulation power of 100 Watts approx.</li> <li>9. Spray coagulation mode.</li> <li>10. Different gradations of blending of cutting and coagulation power.</li> <li>11. Touch Screen Display of all controls and set values of cutting and coagulation power, error messages etc.</li> <li>12. Audio and visual alarms. 220V, 50 Hz.</li> </ol> <p style="text-align: center;"><b>ACCESSORIES FOR EACH SET :</b></p> <ol style="list-style-type: none"> <li>13. 3X Monopolar handle with cord.</li> <li>14. 3X Bipolar forceps with cord.</li> <li>15. 1X Trolley having anti-static lockable wheels.</li> <li>16. Attachment for monopolar coagulation.</li> <li>17. 6X Knife electrode.</li> <li>18. 6XSurgical electrode, ball-shaped.</li> <li>19. 6XWire loop electrode.</li> <li>20. 6X Needle electrode.</li> <li>21. 6X Ball electrode.</li> <li>22. 6X Bipolar coagulation forceps.</li> <li>23. 1X Reusable silicon patient plate.</li> <li>24. 2X Double paddle foot switch, explosion proof.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty of all parts including consumables			
<b><u>COUNTRY OF MANUFACTURER</u></b>			
<b><u>Local</u></b>			

Serial No	14		
Estimated Unit Cost	58258	Quantity	8
Generic Name	MAGNIFYING OPERATING LOOPS		
Clinical Purpose	Use in fine surgery especially surgery on nerves, tendons and small vessels.		
<b>TECHNICAL SPECIFICATIONS</b>			
<b>TYPE A</b> Binocular alilean loupes with fatigueless view. Magnification: 2.5x – 3.0x Working distance: 550-300 mm. Field of view: 115-70 mm. Titanium or sport frame designed specifically to use with loupes in different colors.			
<b><u>WARRANTY:</u></b>			
1 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
<u>USA/EUROPE/JAPAN</u>			

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Item #

35

SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS	
Clinical Specialty	PEDIATRIC PLASTIC SURGERY
Generic Name	K wire driver Qty. 02
Clinical Purpose	Used for correction of contractures by introducing wires and rearranging bones.
TECHNICAL SPECIFICATIONS	
<ul style="list-style-type: none"> <li>• Light weight handle to be precisely captured like a pen or pistol.</li> <li>• Cannulated for use with multiple wire lengths.</li> <li>• K-Wire driver operating speed: 300 RPM or more.</li> <li>• Smooth K-wires with wire guide between 0.75mm – 2.0mm or more in dia.</li> <li>• Automatic grip mechanism securely holds the wire.</li> <li>• Grip mechanism can be locked into position for wire removal.</li> </ul> <p><b>Accessories:</b></p> <ul style="list-style-type: none"> <li>• Hand unit with wire/ compatible connector autoclaveable at 135c or above (1)</li> <li>• Control unit if separate (01)</li> <li>• Attachment for wire driver if detachable. (1)</li> <li>• K-Wire with wire guide 0.75-1.0mm (200)</li> <li>• K-Wire with wire guide 1.0-1.5mm (100)</li> <li>• Oil spray bottle (02)</li> <li>• autoclaveable case with lid and silicone mat (01)</li> <li>• User Manual (01)</li> </ul> <p>Optional (If any): Microsaw unit/ microdrill unit if detachable with hand unit (1)</p> <p><b>Warranty :</b> Comprehensive 3 years warranty</p> <p><b>Country / Origin of Manufacturer:</b> USA / Europe / Japan</p>	

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<b>Serial No</b>	16		
<b>Estimated Unit Cost</b>	1,561,297	<b>Quantity</b>	5
<b>Generic Name</b>	HAMBY GRAFT KNIFE		
<b>Clinical Purpose</b>			
<b>TECHNICAL SPECIFICATIONS</b>			
<b>SKIN GRAFT MESHER</b>			
<ol style="list-style-type: none"> <li>1. Capable of handling thin and thick grafts of any length</li> <li>2. Geometrically defined cutting of skin graft</li> <li>3. Efficient performance</li> <li>4. Availability of different expansion ratios for flexibility</li> <li>5. Keyless disassembly OR recommended design of manufacturer</li> <li>6. Humby Skin Graft Knife.</li> </ol>			
<b><u>WARRANTY:</u></b>			
3 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
<u>USA/EUROPE/JAPAN</u>			

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Serial No	17		
Estimated Unit Cost	494,559	Quantity	2
Generic Name	BLOOD WARMER		
Clinical Purpose	A blood warmer is used in healthcare facilities for warming blood product.		
<b>TECHNICAL SPECIFICATIONS</b>			
<p>Microprocessor controlled unit should have facility of reliable transfusion and infusion for intra and postoperative hypothermia.                      Dry warming system.                      Online warming with tubing.                      Pre-selected temperature settings over the range 37OC to 39OC.                      Indications/ display for different temperatures.                      Blood warming device with safety cutout at 41-43 OC.                      Visual and audible alarm for low and high temperature</p>			
<b><u>WARRANTY:</u></b>			
3 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
<u>USA/EUROPE/JAPAN</u>			

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Serial No	18		
Estimated Unit Cost	80,712	Quantity	3
Generic Name	FLUID WARMER		
Clinical Purpose	A fluid warmer is a medical device used in healthcare facilities for warming fluids, crystalloid, colloid, or blood product, prior to being administered (intravenously or by other parenteral routes) to body temperature levels in order to prevent hypothermia in physically traumatized or surgical patients.		
<b>TECHNICAL SPECIFICATIONS</b>			
Unit should be electronically controlled for reliable transfusion and infusion procedure			
<ul style="list-style-type: none"> <li>• With blood warming adjustable coil</li> <li>• With safety device thermo control 39-40 deg C</li> </ul>			
<b><u>WARRANTY:</u></b>			
3 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
<u>LOCAL</u>			

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SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS	
Clinical Specialty	PEDIATRIC PLASTIC AN' & BURN SURGERY
Generic Name	Forced Air pressure warming system
Clinical Purpose	Patient Heating System allows maintain the necessary body temperature, which allows increase the effectiveness of treatment by reducing the frequency of complications, associated with unintentional hypothermia
TECHNICAL SPECIFICATIONS	
<p>Complete set of unit and hose            LED/ panel for Temperature range            Operating Temperature:            High: <math>43^{\circ} \pm 3^{\circ}\text{C}</math> (<math>109.4^{\circ} \pm 5.4^{\circ}\text{F}</math>),            Med: <math>38^{\circ} \pm 3^{\circ}\text{C}</math> (<math>100.4^{\circ} \pm 5.4^{\circ}\text{F}</math>),            Low: <math>32^{\circ} \pm 3^{\circ}\text{C}</math> (<math>89.6^{\circ} \pm 5.4^{\circ}\text{F}</math>)            Quiet and easy-to-use unit            Adjustable airflow, precise temperature delivery            Safe, quick temperature response            Two airflow settings and hose-end temperature sensing</p>	
Accessories:	
Optional (If any):	

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Serial No	20		
Estimated Unit Cost	5865209	Quantity	1
Generic Name	OPERATING MICROSCOPE		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Floor mounted stand, counter balance suspension arm <del>and component for angular movement.</del></li> <li>2. Microscope body with 5multistep magnification changer (manual or motorized)</li> <li>3. Built in coaxial illumination, motorized fine focusing and manual/motorized coarse focusing</li> <li>4. Objective: f=300.</li> <li>5. Binocular tube inclined at fixed angle.</li> <li>6. Eyepiece 12.5x with dioptic adjustment.</li> <li>7. Sterilization protective caps for all drive knobs.</li> <li>8. Illumination with controllable intensity with halogen or LED.</li> <li>9. With or without fiber optics.</li> <li>10. Water proof foot control panel.</li> <li>11. HD video camera integration with recorder, LED Screen 40inches or more.</li> <li>12. Complete with all accessories.</li> </ol>			
<b><u>WARRANTY:</u></b>			
5 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/EUROPE/JAPAN			

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Serial No	21		
Estimated Unit Cost	309,099	Quantity	2
Generic Name	HAND HELD DOPPLER		
Clinical Purpose	Hand Held Doppler is used for the assessment of peripheral vessels		
<b>TECHNICAL SPECIFICATIONS</b>			
Vascular Probes 4, 5 and 8. MHz Main unit should have LCD Display of waveform and numerical data			
<b><u>WARRANTY:</u></b>			
3 Years comprehensive warranty including all parts and consumables.			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
<u>USA/EUROPE/JAPAN</u>			

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PVMS OF MEDICAL EQUIPMENT/INSTRUMENTS	
Clinical Specialty	PAEDIATRIC PLASTIC SURGERY
Generic Name	MICROVASCULAR SET (Imported) Qty. 03 Sets.
Clinical Purpose	These instruments are used for repair of vessels and nerves in post traumatic deformities of hand in children.

TECHNICAL SPECIFICATIONS

JEWELERS FORCEPS MICRO-GRIP, STR. 13CM, 5"	4
MICRO SCISSORS, STR. 16,5CM, 6 1/2"	2
MICRO SCISSORS, CVD. 16,5CM, 6 1/2"	1
MICROFORECEPS, STR, 6 CM, 3"	2
MICRO NEEDLE HOLDER, STR. 15 CM, 5 1/2"	2
MICRO NEEDLE HOLDER, CVD. 15 CM, 5 1/2"	1
MICRO CLAMPS SINGLE 2X8MM ,10-14 GM PRESSURE,	2
MICRO CLAMPS DOUBLE ,2X8MM ,10-14 GM PRESSURE	1
MICRO CLAMPS SINGLE 3X11MM ,17-23 GM PRESSURE,	2
MICRO CLAMPS DOUBLE , 3X11MM ,17-23 GM PRESSURE,	1
MICRO CLAMPS SINGLE 3.5X16MM ,35X44 GM PRESSURE,	2
MICRO CLAMPS DOUBLE ,3.5X16MM ,35-44 GM PRESSURE	1
MICRO CLAMPS SINGLE 4X24MM ,60-74 GM PRESSURE,	2
MICRO CLAMPS SINGLE 4X24MM ,60-74 GM PRESSURE,	2
MICRO CLAMPS DOUBLE , 6X36MM ,120-140 GM PRESSURE,	1
MICRO CLAMPS DOUBLE , 6X36MM ,120-140 GM PRESSURE,	1
MICRO CLAMPS SINGLE APPLICATOR	1
MICRO CLAMPS DOUBLE APPLICATOR	1
MICRO CLIP APPLICATOR SMALL-	1
MICROINSTRUMENT STERILIZATION BOX FOR 16 INSTRUMENTS AND CLAMPS with silicon matt	1

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SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS	
Clinical Specialty	PEDIATRIC PLASTIC SURGERY
Generic Name	HAND SURGERY INSTRUMENTS SET <i>Qty. 05 Sets.</i>
Clinical Purpose	Used for reconstructive surgery of various congenital, post burn and post traumatic hand deformities in children.

## TECHNICAL SPECIFICATIONS

LEAD HAND FOR ADULTS	1
LEAD HAND FOR PAEDS	3
SCALPEL HANDLE No. 3	1
SCALPEL HANDLE No. 4	1
KILNER CUTANEOUS HOOK 15CM	1
CUTAN HOOK GILLIES FIG. 1, SHARP 18CM	1
JACKSON RETRACTOR 17CM	1
MANNERFELT RETRACTOR SHARP 15.5CM	1
MANNERFELT SADDLE HOOK FEN. 12 X 12MM	1
RETRACTOR FLEX. 3 PRONGS BLUNT 16CM	1
KLAPP RETRACTOR 2 PRONGS 17.5CM	1
DESMARRES RETRACTOR 15MM, 13CM	1
KOCHER LANGENBACK RETRACTOR 25 X 6MM	1
LANGENBACK RETRACTOR 30 X 11MM, 21CM	1
DISSECTING SCISSORS BABY METZENBAUM CVD 14.5CM	2
DISSECTING SCISSORS REYNOLDS FINE CVD 15.5CM	2
FINE SCISSORS KILNER CVD SL. 12.5CM	2
SCISSORS MAYO STILLE CVD 14.5CM	2
SCISSORS FINO SH/SH STR, 10.5CM	2
SCISSORS FINO SH/SH CVD, 10.5CM	2
TISSUE FORCEPS ADSON STR 1X2T, 12CM	1
TISSUE FORCEPS ADSON STR 1X2T, 12CM	1
JEWELLER FORCEPS MICRO GRIP STR 13CM	2
HEMOST FORCEPS ROCHESTER PEAN CVD 14CM	1
HEMOST FORCEPS ROCHESTER KOCHER STR, 1X2T, 24CM	1
FORCEPS MICRO JACOBSON SHARP 18CM	2
BONE RONGEUR BOHLER STR 15.5CM, 4MM	1
BONE RONGEUR LUER STR 17.5CM	1
MYRTLE BLADE PROBE 14CM	1
RETRACTOR WEITLANER BLUNT 13CM	1
RETRACTOR WEITLANER BLUNT 16.5CM	1

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LARSEN TEND GRASP FORCEPS 3MM, 10CM	1
LARSEN TEND GRASP FORCEPS 4MM, 10CM	1
LARSEN TEND GRASP FORCEPS 5MM, 10CM	1
HEMOST FORCEPS ADSON STR 1X2T, 18.5CM	1
NEEDLE HOLDER CRILE WOOD TC STR 15CM	1
NEEDLE HOLDER MAYO HEGAR TC STR 16CM	2
NEEDLE HOLDER MAYO HEGAR TC HEAVY STR 20CM	2
MICRO NEEDLE HOLDER CVD 14CM	2
MALLET 150G, Ø 25MM, 19CM	1
WIRE CUTTING PLIER TC 22CM	1
WIRE CUTTING SCISSORS SERR TC 12CM, SERR	1
BUNNELL TENDON PASS. INST. 18CM	1
RALK HAND DRILL WITH JACOB CHUCK & KEY	1
TENOTOMY SCISSORS STEVENS SHARP 11.5CM	2
TENOTOMY SCISSORS STEVENS SHARP CVD 11.5CM	2
DISSECTING SCISSORS JAMESON FINE CVD SC 15.5CM	2
SCISSORS SH/BL STR FIG. 2, 14.5CM	2
MALTZ RASP TC FIG. 8, 17CM	1
BUCK GRAMCKO LEVER 15CM	2
BONE HOLDING FORCEPS 16CM	1
WIRE SEIZING FORCEPS 19CM	1
KLEINERT KUTZ TENDON FORCEPS 20CM	1
RASPATORY 3MM, 18.5CM	1
RASPATORY 6MM, 19CM	1
CUTAN HOOK GILLIES FIG. 2, SHARP 18CM	1
MICRO SCISSORS STR 16.5CM	5
MICRO SCISSORS CVD 16.5CM	5
JEWELLER FORCEPS MICRO GRIP STR 13CM	3
MINI LANGENBACK 10 X 6MM, 16CM	2
HOKE OSTEOTOME 3MM, 14CM STR	2
HOKE OSTEOTOME 6MM, 14CM STR	2
VOLKMANN CURETTE FIG.00, 17CM, 4.4MM	1
VOLKMANN CURETTE FIG.2, 17CM, 8.5MM	1
SCISSORS SH/SH CVD SC, 12CM, SERR	2
VESSEL SCISSORS POTTS SMITH ANGLED 45°, SC, 18.5CM	2
FINE SCISSORS CVD SC. TC, 11.5CM	2
ALM RETRACTOR SHARP 7CM	1
LISTON CUTT. FORCEPS STR 17CM	1
BOHLER CUTT. FORCEPS STR 15CM	1
BUNNELL TENDON STRIPPER MALL. 5.5MM	1

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CONTAINER SYSTEM	
Sterilization Container, silver	1
outside 285x280x135, ins. 262x260x116mm	
Lid perforated - Bottom perforated	
Wire Baskets 255x245x70mm	1
sterilis.drape green 130x60 cm	1
Identification Label, silver	2
Permanent Filter round Ø 190mm	4
for 1/1, 3/4 and 1/2 Container	
made of TEFLON/PTFE ca 1200x using	

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SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS

Clinical Specialty	PEDIATRIC PLASTIC SURGERY	Qty. 40 Sets
Generic Name	General plastic and burn surgery sets, LOCAL INSTRUMENTS	
Clinical Purpose		

TECHNICAL SPECIFICATIONS

Each set contains

Tray Kidney medium	1
Tray Kidney large	1
Lotion Bowl 50x100mm, 250ml	2
Scalpel handle #3	2
Scalpel handle (B.P. type) hexagonal#3	2
Frazier/McGuckin Suction Tube 10.FG 30ø, 19cm	2
Gillies Hooklet Delic Fig.2, 18cm	4
Castroviejo Scleral Marker 0-20mm	1
Standard Dressing Fcps serr 14.5cm	2
Rampléy Sponge Holding Fcps 18cm	2
Backhaus Towel Fcps 11cm	4
Adson forceps (120 mm, non-toothed)	2
Lexer Baby Op-Scissors cvd 10cm	2
Ryder Ndle Holder 13cm TC	2
Halsey Ndle Holder serr 13cm TC	2
Halstead Micro Mosquito Fcps cvd 12cm	4
Freer Septum Elevator sh/bl 4.5mm, 18cm	1
Sterilizing Container perforated 400x200x90mm	1
METZENBAUM Fino Scissors blunt str 18cm TC	4

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Bonn Suture Tying Fcps 1x2T, 0.12mm	2	
Adson Dressing Fcpserr 12cm	2	
STEVENS Tenotomy Scissors sh/shcvd 11cm	3	
Galipot 2.Oz, 60ml	1	
Adson Dressing Fcps 1x2T 12cm	2	
Strabismus Scissors cvd 11cm	2	
Mayo Scissors str 17cm TC	2	
METZENBAUM Fino Scissors blunt cvd 18cm TC	2	
Medium Langenbeck Retractor	2	
Mini Langenbeck Retractor 20x6mm, 16cm	2	
Volkman Bone Curette 17cm, small, medium and large	1 each	
Right anle suture tying forecepsleheys small and medium	1 each	
Large quadrangular tray	1	
<b>Accessories:</b>		
<b>Optional (If any):</b>		

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SPECIFICATION OF MEDICAL EQUIPMENT/INSTRUMENTS		
Clinical Specialty	PEDIATRIC PLASTIC AND BURN SURGERY	Qty. 25 Sets.
Generic Name	Dressing set for burn patients, LOCAL INSTRUMENTS	
Clinical Purpose		
TECHNICAL SPECIFICATIONS		
Each set contains		
Tray Kidney medium		1
Lotion Bowl 50x100mm, 250ml		1
Standard Dressing Fcpserr 14.5cm		2
Adson forceps (120 mm, non-toothed)		2
Lexer Baby Op-Scissors cvd 10cm		2
Ryder Ndle Holder 13cm TC		2
Halstead Micro Mosquito Fcpscvd 12cm		4
Sterilizing Container perforated 300x150x90mm		1
METZENBAUM Fino Scissors blunt str 18cm TC		2
Bonn Suture Tying Fcps 1x2T, 0.12mm		1
Adson Dressing Fcpserr 12cm		2
STEVENS Tenotomy Scissors sh/shcvd 11cm		1
Adson Dressing Fcps 1x2T 12cm		2
Strabismus Scissors cvd 11cm		1
Mayo Scissors str 17cm TC		1
METZENBAUM Fino Scissors blunt cvd 18cm TC		1
Accessories:		

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Serial No	26A		
Estimated Unit Cost	Rs. 1748760	Quantity	4
Generic Name	Hydro Therapy Pool (Local)		
Clinical Purpose	Hand Held Doppler is used for the assessment of peripheral vessels		
<b>TECHNICAL SPECIFICATIONS</b>			
<ol style="list-style-type: none"> <li>1. Bathtub have polished , high-finish, acid resistant stainless steel tank</li> <li>2. Bathtub have hydraulic adjustable height</li> <li>3. Control panel manufactured in stainless steel</li> <li>4. Control panel with electronic control functions operated by push buttons or touchpads</li> <li>5. Digital Temperature Control</li> <li>6. Bath tub includes foot support</li> <li>7. Bathtub include patient head pillow/wedge</li> <li>8. Bathtub include a patient shower with hose or shower handle and the taps</li> <li>9. Scalding protection</li> <li>10. Push button controlled auto fill on/off</li> <li>11. Push button controlled hydro massage on/off</li> <li>12. Single whirlpool outlet that can be quickly fully cleaned</li> <li>13. Capacity (approx.) 280 litres or more</li> <li>14. Length (bathtub) 1900mm or more</li> <li>15. Width (bathtub) 800mm or more</li> <li>16. Tub rim height: 1100mm or more</li> <li>17. Weight limit ( patient) 180kg or more</li> </ol>			
<b>WARRANTY:</b>			
5 Years comprehensive warranty including all parts and consumables.			
<b>COUNTRY OF MANUFACTURER:</b>			
<b>LOCAL</b>			

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Serial No	2667		
Estimated Unit Cost	1,452,816	Quantity	1
Generic Name	Autoclave Class B (Bench top )		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<p>Chamber Capacity: 20-25 Liter.                      Loading Capacity: 5kg instruments or 1.5kg textiles or more                      Table top Standalone Class B-Autoclave                      Built-in Electric Steam Generator made of stainless steel                      Fully automatic microprocessor controlled autoclave                      Digital LCD display                      5 Sterilization programs                      Fast cycle programs                      Temperature Cycle 134°C in 30-45 min                      Temperature Cycle 121°C in 45-60min                      Vacuum and Bowie &amp; Dick test program                      Serial interface for documentation                      Automatic electrical door lock with safety door lock system                      Easy to use by single button start Electro-polished stainless steel chamber 304/316                      Temperature sensor                      Internal storage of last 40 cycles data/Automatic storage of the sterilization cycle on pen drive/flash card Built-in monitoring system to check the cycle automatically Triple-pre and deep post vacuum Two reservoirs for fresh and waste water 4/5 pieces of compatible trays with the autoclave One piece of tray holder</p> <p><b>Accessories:</b> Standard Accessories including Integrated thermal printer for the automatic print of the sterilization data at the end of the cycle.</p>			
<b><u>WARRANTY:</u></b>			
5 years comprehensive warranty including all parts and consumables			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ EUROPE / JAPAN			



Serial No	26 (C)		
Estimated Unit Cost	Rs. 123,640/-	Quantity	01 No.
Generic Name	HANDWASH SCRUB (SINGLE BAY)		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<p>Stainless steel construction of non-magnetic material 304. Stainless Steel gauge 16, argon welded.</p> <p>Single bay system, bay size 3'x3'x2'.</p> <p>Mechanical water valve Stopped basin anti splash ends.</p> <p>Elbow operating water flow. Soap dispensing</p>			

 *Asst. in Charge*

Serial No	28-(a)		
Estimated Unit Cost	Rs. 74,144/-	Quantity	04 Nos.
Generic Name	Stretcher		
Clinical Purpose	Use for the Patient Shifting Safety		
<b>TECHNICAL SPECIFICATIONS</b>			
<p>Madeintwoparts:</p> <ol style="list-style-type: none"> <li>1. Stretcherremovable</li> <li>2. Base trolley. Made from 1-1/4" x 1-1/4" square M.S.pipe16SWG havingM.S.sheet20SWGinbedding</li> </ol> <p>Patient SafeWorkingLoadcapacitymin150 kgormore.</p> <ul style="list-style-type: none"> <li>• Size85cm (H)x60cm (W)x195cm (L)</li> <li>• Thebeddingareacoveredby2"1stqualityfoamRexenecover.</li> <li>• Havingsiderailcollapsible.</li> <li>• Stretchershouldalsohavefourreflectingbumpers.</li> <li>• I.V.rodprovisiononbothsidesandurinebaghooks.</li> <li>• Having8"wheelcasterstwowithbrake.</li> <li>• Withutilitybasket.</li> </ul>			

<b>Serial No</b>	28B		
<b>Estimated Unit Cost</b>	400,000/-	<b>Quantity</b>	6
<b>Generic Name</b>	Crash Cart (Local)		
<b>Clinical Purpose</b>			
<b>TECHNICAL SPECIFICATIONS</b>			
<p>Trolley for emergency                  Stainless steel                  Stainless steel recessed top                  Three or more drawers                  Overall Dimensions: 20" L x 30" W x 35" H (approximately 10 % tolerance)                  Lower cupboard with central locking / securing all drawers and cupboard                  Ergonomic Push handle                  125 mm antistatic castors with locking                  Cardiac board housing brackets at rear of trolley.                  Universal rail system fitted to width of trolley                  Pull-out Shelf.                  Overhead frame for some of the accessories</p> <p><b><u>ACCESSORIES:</u></b></p> <p>1 x Aneroid sphygmomanometer                  1 x Side Accessory mount rail.                  1 x Cylinder holder bracket, 48 cft                  1 x Double hook stainless steel I.V. Pole                  1 x Swivel Shelf (Monitor/Defibrillator)                  1 x Waste Basket/Sharp Container                  1 x Drawer Dividers</p> <p><b><u>WARRANTY:</u></b></p> <p>3 years comprehensive warranty including all parts</p> <p><b><u>COUNTRY OF MANUFACTURER</u></b>                  Pakistan (Local)</p>			

  Aslam Khan

Serial No	28 (C)		
Estimated Unit Cost	Rs. 61,820/-	Quantity	02 Nos.
Generic Name	Patient STRETCHER with side bars & Oxygen Cylinder		
Clinical Purpose			
<b>TECHNICAL SPECIFICATIONS</b>			
<ul style="list-style-type: none"> <li>• Overall dimensions approx. size: 2000mm L x 550mm W x 800mm H.</li> <li>• Stain less steel Construction</li> <li>• Fixed height trolley frame</li> <li>• Base trolley made of 1 1/4 x 1 1/4 inch pipe 16SWG. Top frame 18G (1 1/4 x 1 1/4 inch)</li> <li>• IV pole socket with pole rod SS. Same as in Bed</li> <li>• Mobile on 6" heavy duty plate type castors with diagonally brake lock</li> <li>• Stretcher top with head raise facility by combi bracket upto 60deg.</li> <li>• Buffer on four corners.</li> <li>• Smooth edges, burr free</li> <li>• Collapsible Side Guards as per sample design</li> <li>• Top detachable</li> <li>• Top made of foam mattress/ Rexene</li> </ul> <p>Patient weight bearing capacity: 200Kg or more</p>			



*Aslan Ban*

Serial No	26-11)
Estimated Unit Cost	Rs. 200,000/-      Quantity    01 No.
Generic Name	Patient Transfer Stretcher Trolley
Clinical Purpose	Use for the Patient Shifting Safely

**TECHNICAL SPECIFICATIONS**

- Overall dimensions approx. size: 2000mm L x 500mm W x 800mm H.
- Stainless steel Construction
- Height adjustable Hydraulic
- Base made of 1 1/2 inch pipe (65MM). Top frame (W x L) 1 1/2 x 1 1/2 (inch)
- 10 pole wheel with pole rod SS. Same as in Bed
- Motorized heavy duty plate operation with diagonal hydraulic lock
- Stretcher top with extra wheel facility construction up to 10 deg.
- Buffers in four corners.
- Smooth edges, burr free
- Collapsible Side Guards as per sample design
- Top detachable
- Top made of foam mattress Revere  
Patient weight bearing capacity 200kg or more

9/11/20  
Rajesh Kumar

Serial No	28E		
Estimated Unit Cost	250,000/-	Quantity	4
Generic Name	Fowler bed along with Mattress, Over bed table, Bedside Locker (Local)		
Clinical Purpose	Used for patients in general ward.		

### TECHNICAL SPECIFICATIONS

3 Function bed. Height Adjustable Head raise, and Leg raise,  
 Over all dimensions: 39" W x 90" L x 21" H Approx. Main Frame: Made of 16 SWG pipe 1-1/4" x 2-1/2" rectangular pipe section CO2 welded together at corners. End of Pipes be covered with special plastic bushes  
 Mattress Frame: Should be in 4 parts The 2nd part fixed and 3 moveable parts made of 1 -1/4" x 1-1/4" longitudinal & 1" cross pipes of steel square pipe of 16 SWG. The end of each moveable part should be attached to the main frame by means of bolt having metal hinges.

**FIXED SIZES (Approx.):**

- 1) Head Raise part: 25" x32"
- 2) Fixed Part: 8" x32"
- 3) Knee Bridge Part: 12 x32"
- 4) Leg Rest part: 24 "x32" Bedding area made of solid 5mm dia. wire mesh. Head Raise & Knee Raise by means of two crank All Crank moving pipe at head and leg places be of 16SWG 1 -1/4" rounded pipe, attached across Head and leg part with triangular brackets of 5/16" thick x 1 -1/4" x 12" long plate. The foot part should have vascular position with a lever mechanism for moving of foot part in knee bridge position. A surface bearing must be fixed for friction free movement of crank.

The handle of the cranks should be retractable and collapsible and be made in one piece of 1/2" steel rod. Cranks main screw made of dia: 3/4" steel rod with square / ACMI type of threading with safe limit mechanism. Head & Foot Part of Mattress frame have (Mattress stay) steel brackets CO2 welded for keeping the mattress in proper place. High quality head & foot panels made of SS pipe and baculite sheet 6mm material. The panels of both ends are easily removable in emergency.

Bed is provided with I.V. Rod, S.S 5/8" dia, adjustable from (36" to 50"), with 2Nos Non traumatic prongs/ hooks. The provision is made to attach the IV rod on both side of the bed. Hooks for N.G. / urine Bag on both sides.

**Foundation Frame:**

Made of 16 SWG 1-1/4" x 2-1/2" Rectangular pipe welded together at corner.

**Bumpers:**

Four 5" rounded bumpers of made of flexible material at all corners.

**Castors:**

5 " ball bearing rust proof, water proof, high quality castors with individual Total locking on two casters.

**Finish:**

All metals part to be chemically degreased / derusted through phosphate treatment and covered with antimicrobial polyester powder coating.

**Welding:**

All metal parts should be welded by CO2 gas.

**Side Rails:**

Foldable side guards with smooth rounded Aluminum top and Stainless-steel bars. Fixed to the bed on both sides covering 70% of platform length when engaged. Steel locking mechanism for strength. Minimum height when in use 30 cm from mattress platform.

**Mattress:**

Best quality mattress foam of 4" thickness having density of 32 kg/m3. Water proof Rexene cover having best quality with Zipper.



**IV ROD**

Rust free high quality steel less steel one on each corner.

**BED SIDE LOCKER:**

Powder coated sheet steel construction. Galvanized steel sheet 20 SWG. Top drawers with one bottom compartment. Built-in handles for durability. Plastic /SS top laminated with raised edges on 3 sides 50 mm twin castors rust proof waterproof, two lockable. Casters with rubber tires for noise free operation on floors. Compatible with the offered bed in color and functionality. All metal parts should be welded by CO<sub>2</sub> gas. Approx. overall size: 18" W x 15" D x 34" H (Approx.).

**OVER BED TABLE:**

Powder coated Mild steel construction. Stainless steel internal column. Gas spring assisted height. Height adjustable from 70 to 100cm adjustment. Compatible with the offered bed in color and functionality. Plastic /SS top with rounded edges and cup/glass holders Approx. top size: 81 x 35 cm (Approx.). 50mm twin casters. Casters with rubber tires for noise free operation on floors. Stainless steel foot rest at base. All metal parts should be welded by CO<sub>2</sub> gas.

**ATTENDANT BENCH:**

MS Pipe/ tube base structure (1"x1") with matching paint. Full laminated Top of ¾" thick Sheesham Wood (best quality).

Size of the bench is 60"x18"x15" (LxHxW) approx.

**WARRANTY:**

3 Year comprehensive warranty including all parts and consumables

**COUNTRY OF MANUFACTURER:**

Local (Pakistan)

**Procurement of Electro Medical Equipment, Plant & Machinery and IT Equipment for Establishment of Pediatric Burn Centre SR. No: 29**

**(a)**

**CCTV Security Camera System with all accessories & Complete Installation**



Sr. No	Item Description	Specifications	QTY
1	IP Based Cameras (2 MP)	2 MP, 1/2.7" CMOS image sensor, low illuminance, high image definition Outputs max. 2MP (1920 × 1080p) @25/30 fps H.265 codec, high compression rate, ultra-low bit rate Built-in IR LED, max. IR distance: 30 m ROI, SMART H.264/H.265, Abnormality detection: Motion detection, video tampering, network disconnection, IP conflict, illegal access 12V DC/PoE power support ,IP67 protection	16 Nos.
2	Network Video Recorder 16Channel 4K- (2-HDD Supported)	16-channel IP Based Cameras Supported Smart H.265+/Smart H.264+/H.265/H.264; H.265 auto switch Max 200 Mbps incoming bandwidth Up to 8MP resolution for preview and playback 8-channel decoding@1080p (30 fps) AI by Camera: Perimeter protection; SMD Plus; people counting; heat map Support IPC UPnP	1 Nos.
3	Networking Switch PoE 8 Ports + 2 SFP Ports	8-Port Fast Ethernet PoE Switch Layer two commercial switch Supports IEEE802.3, IEEE802.3u and IEEE802.3X standards MAC auto learning, aging, MAC address capacity is 2K Supports MDI/MDIX self-adaptation RJ45 port supports 10/100/100 Mbps self-adaptation Supports IEEE802.3af and IEEE803.3at power supply standards Adopts metal enclosure Supports Hi-PoE 60W Supports DC 48-57V power supply	3 Nos.
4	Power Distribution Unit 6 Ports	Power Distribution Unit 6 Ports	2 Nos.
5	Cabinet 4U with Fan	AWG 18 to 20, With Cooling fan	1 Nos.
6	PVC Junction Box (Size 2*2)	PVC Junction Box (Size 2*2)	16 Nos.
7	Hard Disk (4TB)	Surveillance Hard Drive 64MB Cache	2 Nos.
8	Cabling (Cat 6 Cable) Ducts, piping complete Installation	Cat 6 Pure Copper 23 AWG	2500 Rft
9	LED 32" Inch (CCTV Cameras Surveillance)	2 * HDMI , 2 * USB , VGA Port, Resolution 1366*768 , 4K Supported	2 Nos.
10	HDMI Cable 4K Supported (5-Meter)	4K Supported	2 Nos.



**Procurement of Electro Medical Equipment, Plant & Machinery and IT  
Equipment for Establishment of Pediatric Burn Centre  
SR. No: 29 (b)**

**Audio Visual System for Theater to Committee Room with all accessories & Complete**

Sr. No	Item Description	Specifications	QTY
1	Amplifier with Mixer	60 Watt rated power, 3 MIC inputs 2 AUX inputs 3 MIC volume control AUX volume control , Phone Jack MIC Input	1 Nos.
2	Amplifier with Mixer	120 Watt rated power, 3 MIC inputs 2 AUX inputs 3 MIC volume control AUX volume control , Phone Jack MIC Input	1 Nos.
3	Speakers Ceiling Mount	Built-in 100v/70v transformer In-ceiling type loudspeaker 5" speaker unit Power taps 6W @100V & above Metal grille & ABS baffle Spring clip fast installation	4 Nos.
4	Hand Microphone Wireless	Handheld wireless microphone x 1 Receiver x 1	2 Nos.
5	Collar Mic /Headmic Wireless	Wireless Transmitter x 1 Receiver x 1 Microphone x 1	2 Nos.
6	Cable & Other Accessories	High Performance 14 Gauge Speaker Wire ,	As per Actual
7	Fiber Cable	6 Core Fiber Cable	As per Actual
8	Fiber Media Converter	Audio, Video Signal Converter	As per Actual

**Procurement of Electro Medical Equipment, Plant & Machinery and IT  
Equipment for Establishment of Paediatric Burn Centre SR.  
No: 29 (c)**

**Speakers System with all accessories & Complete Installation**

Sr. No	Item Description	Specifications	QTY
1	Amplifier with Mixer	60 Watt rated power, 3 MIC inputs 2 AUX inputs 3 MIC volume control AUX volume control , Phone Jack MIC Input	1 Nos.
2	Speakers Ceiling Mount	Built-in 100v/70v transformer In-ceiling type loudspeaker 5" speaker unit Power taps 6W @100V & above Metal grille & ABS baffle Spring clip fast installation	10 Nos.
3	Microphone	Table microphone wired	1 Nos.
4	Cable & Other Accessories	High Performance 14 Gauge Speaker Wire , Connetctors related accessors with complete Installation	As per Acutal

  
  
ABANKAN

**Procurement of Electro Medical Equipment, Plant & Machinery and IT  
Equipment for Establishment of Paediatric Burn Centre SR. No: 30 (a)  
Desktop Computer System Core i7 (with Complete Accessories) Quantity: 05**

Sr#	Specifications	
1	Processor	Intel 12th Generation Core i7 3.0 to 5.0 GHz (Base Frequency)
2	Mother Board	Intel Chipset
3	Memory	16 GB DDR- 4 or higher (Support up to 64GB)
4	Hard Disk Drive	1 TB
5	SSD	256 GB or Higher
6	Video/Display Card	Integrated
7	Sound Card	Integrated
8	Integrated I/O	Six USB Ports (USB 2.0/3.0/3.1), PCI/PCIe Slot etc, HDMI/VGA Port
9	Network	Built-In Gigabit Ethernet, Wireless, Lan a/b/g/n or ac
10	Super Drive	Yes
11	Graphic Card	Built-In
12	Mouse & Key Board	USB Wired Keyboard, 2-Button USB 2.0 Optical Mouse
13	Operating System	Windows 10 Pro upgradable Windows 11 Pro
14	Warranty	1 Year's Manufacturer's Warranty
15	Country of Manufacturing & Origin	Any Country including China, Japan, USA, Europe
16	Display	19.5" Inches or higher LED Monitor including all cables)

**Note: All items under this lot must be of same brand.**

**UPS (with Complete Accessories) Quantity: 05**

Sr#	Specifications	
1	Output power capacity	325 Watts / 650VA
2	Output Connections	Universal receptacle (Battery Backup)
3	Nominal Output Voltage	230V
4	Nominal Input Voltage	230V
5	Input Connections	NEMA 5-15P
6	Cord Length	1.2 meters
7	Maximum Input Current	5.0A
8	Country of Manufacturing & Origin	Any Country including China, Japan, USA, Europe

*USA or Raw*

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**Procurement of Electro Medical Equipment, Plant & Machinery and IT Equipment for Establishment of Pediatric Burn Centre SR. No: 30**

(b)

**Laserjet Printer (Black&White)(with complete Accessories) Quantity: 02**

Sr. #	Specifications	
1	Print Technology	LaserJet
2	Print Quality(Mono)	Up to 1,200 x 1,200 dpi
3	Print speed	10 ppm & above
4	Monthly duty cycle	10,000 pages & above
5	Connectivity, standard	Hi-Speed USB
6	Power	input voltage: 220 to 240
7	Printing Paper Size	A4, A5, A6, Envelope
8	Color Detail	Black & White
9	Country of Manufacturing & Origin	Any Country Including China, Japan, USA, Europe

*As per Raw*

**Procurement of Electro Medical Equipment, Plant & Machinery  
and IT Equipment for Establishment of Paediatric Burn Centre SR.**

**No: 30 (c)**

**Multifunction Printer(Black&White)**

(with

complete Accessories) Quantity: 01

Sr. #	Specifications	
1	Print Technology	LaserJet
2	Device Category	All in one Multifunction
3	Funcations	Print, Copy, Scan
4	Print Quality(Mono)	Up to 600 x 600 dpi
5	Print speed	Standard
6	Monthly duty cycle	10,000 pages & above
7	Connectivity, standard	Hi-Speed USB
8	Power	input voltage: 220 to 240
9	Printing Paper Size	A4, A5, A6, Envelope
10	Color Detail	Black & White
11	Country of Manufacturing & Origin	Any Country Inculding China, Japan, USA, Europe

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**Procurement of Electro Medical Equipment, Plant & Machinery and IT Equipment for Establishment of Pediatric Burn Centre** **SR. No:**

**31**

**Multimedia Projector**(with Complete Accessories & Complete Installation) **Quantity: 01**

Sr. No	Specifications	
1	Projection System:	DLP
2	Resolution Minimum	800×600 Pixels (VGA)
3	Brightness	3000 Lumens and above
4	Contrast ratio	10,000:1
5	Display Color	1.07 billion colors
6	Aspect ratio	Native 4:3
7	Light Source	Lamp
8	Optical	Throw Ratio: 1.54~1.72 , Zoom Ratio: 2x Lens Control Manual Zoom and Focus
9	Audio:	Built-in Speaker:
10	USB Port	1 × Type A ,1 × Type B
11	Inputs	1 × RGB, 2 × HDMI,1 × VGA 1 × Video (RCA)
12	Outputs	1 × RGB,
13	PC Control	1 × PC Control Port (D-Sub 9 P)
14	Country of Manufacturing & Origin	Any Country Including China, Japan, USA, Europe
<b>Projeter Screen</b>		
Sr. No	Specifications	
1	Size	6ft × 6ft
2	Inches	75 Inch
3	Type	Manual
<b>Projeter Stand</b>		
Sr. No	Specifications	
1	Size	3 Ft Adjustable
2	Type	Metal / Ceiling Mount Square
<b>HDMI Cable 20 Meter</b>		
Sr. No	Specifications	
1	Size	20 Meter
2	Type	4k Supported high Quality
<b>Wireless Slide Changer</b>		
Sr. No	Specifications	
1	Type	Wireless

*V. R. Raw*

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<b>Serial No</b>	<b>23-</b>		
<b>Clinical Specialty</b>	<b>Anesthesia &amp; Ventilation</b>		
<b>Estimated Unit Cost</b>	<b>13,794,000/-</b>	<b>Quantity</b>	<b>01 No.</b>
<b>Generic Name</b>	<b>Continuous Renal Replacement Therapy (CRRT)</b>		
<b>Clinical Purpose</b>	Continuous Renal Replacement Therapy (CRRT) is therapy that replaces the normal blood filtering function of the kidneys. It is used in ICU setups where patients with AKI or multiple organ failure are treated.		
<b>TECHNICAL SPECIFICATIONS</b>			
<ul style="list-style-type: none"> <li>• Continuous Veno-Venous Hemofiltration (CVVH).</li> <li>• Continuous Veno-Venous Hemodialysis (CVVHD).</li> <li>• Continuous Veno-Venous Hemodiafiltration (CVVHDF).</li> <li>• Slow Continuous ultrafiltration (SCUF).</li> <li>• Therapeutic Plasma Exchange (TPE).</li> <li>• Hemoperfusion (HP).</li> <li>• Should have blood leak detector (Optical).</li> <li>• Air Detector (Ultrasonic)</li> <li>• Should have anticoagulant pump heparin &amp; Citrate.</li> <li>• Warmer / heater.</li> <li>• 7 Inch or above touch colored display.</li> <li>• Internal treatment memory.</li> <li>• Should have to perform all therapies including Adults and Peds.</li> </ul>			
<b><u>ACCESSORIES</u></b>			
Provide 20 Kits (5 Adult and 15 Peds) & 100 bags.			
<b><u>WARRANTY:</u></b>			
<ul style="list-style-type: none"> <li>• 5 Years comprehensive warranty including all equipment consumables</li> <li>• Inconsumable reagents near to expiry replacement is responsibility of supplying firm.</li> <li>• One UPS (pure sinewave) for minimum backup of 30 minutes (imported) as per manufacturer recommendation.</li> </ul>			
<b><u>COUNTRY OF MANUFACTURER:</u></b>			
USA/ Europe/ Japan			

