

**OFFICE OF THE MEDICAL SUPERINTENDENT**  
**GHULAM MUHAMMAD MAHAR MEDICAL COLLEGE HOSPITAL, SUKKUR**  
TENDER NO. MS/GMCHS/SUKKUR/4236/ Dt: 03/4/17 <sup>40</sup> DUE ON: 25-04-2017

**NOTICE INVITED TENDERS.**

Sealed Tenders are hereby invited from various Manufacturers / Sole Agent / Authorized Distributors, for the supply of items mentioned below as per bidding process given under Clause 46 (2) Single Stage Two Envelop Procedure of Sindh Public Procurement Rules 2010 (Amended 2013).

A complete set of tender enquiry may be purchased from Office of the Medical Superintendent Ghulam Muhammad Mahar Medical College Hospital Sukkur, also from P&MI Cell, Health Department, 3<sup>rd</sup> Tughlaq House, Sindh Secretariat, Karachi, on submission of written application upon cash payment of non-refundable fee mentioned below. The bids must be submitted on opening date up to 10:00 AM which will be opened publicly in the presence of the bidders or their authorized representative who choose to attend at 11:00 AM at the Office of the Medical Superintendent Ghulam Muhammad Mahar Medical College Hospital Sukkur. All bids must be accompanied by a bid security @ 5% of the total bid cost.

The purchaser reserves the right to accept / reject any / all bids under the relevant provisions of SPPRA Rules 2010 (Amended 2013).


Description of stores	"Revenue Component of ADP Scheme namely "Establishment of 50 Bedded Medical & Surgical ICU, Expansion of Casualty and OPD Departments at GMMMC Hospital Sukkur (Machinery & Others).	Cost of Tender Rs. 3000/-
Dated of Sale of Tender Document	From publication of Tender in print & electronic media.	
Last date of Sale of Tender	24-04-2017	
Date of Submission of Tender	25-04-2017 up to 10:00 AM	
Date & time of Opening	25-04-2017 at 11:00 AM	
Tender Opening Venue	Office of the Medical Superintendent GMMMC Hospital Sukkur.	

N.B.

- 1) In case Govt. announces any Public Holiday then the Tender will be submitted and opened on next working day.
- 2) All NITs shall include Government Taxes including GST,SRB if applicable.
- 3) Information regarding this NIT may also be downloaded from SPPRA website: [www.pprasindh.Gov.pk](http://www.pprasindh.Gov.pk) & Sindh Government Website: [www.sindh.gov.pk](http://www.sindh.gov.pk).

**Address:**

OFFICE OF THE MEDICAL SUPERINTENDENT  
GHULAM MUHAMMAD MAHAR MEDICAL COLLEGE HOSPITAL, SUKKUR

  
**CHAIRMAN PURCHASE COMMITTEE /**  
**PROFESSOR DR GHULAM HYDER RIND**  
**PRINCIPAL**  
**GHULAM MUHAMMAD MAHAR**  
**MEDICAL COLLEGE, SUKKUR**

**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMMC Hospital Sukkur



Health Department  
Government of Sindh

### NOTIFICATION

No.HD (P&E) 5-6 (11) / 2014. The Government of Sindh, Health is pleased to constitute procurement committee under Rule-7 of Sindh Public Procurement Rules 2010, consisting of following members in respect of ADP scheme namely "ESTABLISHMENT OF 50 BEDDED MEDICAL AND SURGINCAL ICU, EXPANSION OF OPD AND CASUALTY DEPARTMENTS AT GMMMC HOSPITAL SUKKUR" for revenue component;

- |   |          |
|---|----------|
| • Dr. Ghulam Hyder Rind,<br>Principal, Ghulam Mohammad Mahar<br>Medical College Sukkur. | Chairman |
| • Dr. Abdul Aziz Memon<br>Additional Medical Superintendent,<br>GMMMC Hospital, Sukkur. | Member   |
| • Dr. Saeed Ahmed Shaikh,<br>Additional Civil Surgeon,<br>GMMMC Hospital, Sukkur.       | Member   |
| • Representative of Commissioner,<br>Sukkur Division Sukkur                             | Member   |
| • Mr. Imtiaz Ali Samo,<br>Divisional Accounts Officer<br>(Representative of AG Sindh).  | Member   |

The committee will responsible to observe all the codal formalities as per Sindh Public Procurement Rules 2010 (Amended 2013).

**DR.FAZLULLAH PECHUHO**  
**SECRETARY HEALTH**

No.HD (P&E) 5-6 (11) / 2014

Karachi, dated 15.03.2017.

**A copy is forwarded for information and necessary action to:**

- The Accountant General Sindh, Karachi.
- The Commissioner Sukkur Division Sukkur with the request nominate the member for above said committee not below the rank of BPS-18.
- The Managing Director, Sindh Public Procurement Authority, Govt. of Sindh, Karachi.
- The Principal, Ghulam Mohammad Mahar Medical College, Sukkur.
- The Medical Superintendent, Ghulam Mohammad Mahar Medical College Hospital, Sukkur.
- All members of committee.
- P.S. to Secretary, Health Department, Govt. of Sindh, Karachi.

Statistical Officer (Dev)

MS GMMMC Hospital Sukkur  
Inward No: 1230  
18-3-17  
12-10-17

*Handwritten notes and signatures:*  
18/3/17  
12/10/17



**NOTIFICATION**

No.HD (P&E) 5-6 (11) / 2014. The Government of Sindh, Health is pleased to constitute the technical committee under Rule-7 of Sindh Public Procurement Rules 2010, consisting of following members in respect of ADP scheme namely "ESTABLISHMENT OF 50 BEDDED MEDICAL AND SURGICAL ICU, EXPANSION OF OPD AND CASUALTY DEPARTMENTS AT GMMMC HOSPITAL SUKKUR" for revenue component;

- |   |          |
|---|----------|
| • Head of Department of Surgery<br>GMMMC Hospital, Sukkur.              | Chairman |
| • Head of Department of Orthopedic<br>GMMMC Hospital, Sukkur.           | Member   |
| • Head of Department of Anesthesia<br>GMMMC Hospital, Sukkur.           | Member   |
| • Head of Department of Radiology,<br>Sukkur Division Sukkur            | Member   |
| • Head of Department of Gynaecology                                     | Member   |
| • Head of Department of ENT<br>Government Anwar Paracha Hospital Sukkur | Member   |
| • Head of Department of Eye<br>Government Anwar Paracha Hospital Sukkur | Member   |

The committee will responsible to observe all the codal formalities as per Sindh Public Procurement Rules 2010 (Amended 2013).

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SECRETARY HEALTH**

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- The Principal, Ghulam Mohammad Mahar Medical College, Sukkur.
- The Medical Superintendent, Ghulam Mohammad Mahar Medical College Hospital, Sukkur.
- All members of committee.
- P.S. to Secretary, Health Department, Govt. of Sindh, Karachi.

*[Signature]*  
Statistical Officer (Dev)

MS GMMMC Sukkur

Inward no: 2227

Date 27-3-2017

Time 10:00 AM

ISSUE TO P.O. Sukkur

Date 27-3-2017

*PO*

*Barkat Ali  
Planning Compliance  
27/3*



Phone # 99203108, 99204203

No. SO (M&I) 2-1/2013 (CRC)

**GOVERNMENT OF SINDH  
HEALTH DEPARTMENT**

(PROCUREMENT MONITORING & INSPECTION CELL)  
Karachi. Dated: the 28<sup>th</sup> March. 2015

**NOTIFICATION**

In supersession of this Department's notification of even number dated: 29<sup>th</sup> July, 2013 and in pursuance of Rules-31 and 32 of Sindh Public Procurement Rules 2010, the Government of Sindh, Health Department re-constitutes Complaint Redressal Committee (CRC) comprising of the following officers for scrutinizing the complaints of aggrieved bidders against tender invited by Health Institutions / Hospitals / Programmes / Projects in Sindh.

01	Secretary Health Department, Sindh	Chairman
02	Additional Secretary(PM&I),Health Department, Sindh	Member
03	Professor Khalida Soomro, Professor of Cardiology, Dow University of Health Sciences / Civil Hospital, Karachi.	Member
04	Dr. Syed Khalid Hussain, Procurement Executive, N.I.C.V.D., Karachi.	Member
05	Representative from Accountant General Sindh, Karachi	Member

**TORs**

- To scrutinize the complaints from the aggrieved bidders and decide the cases strictly in accordance with SPP Rules 2010.

**IFTIKHAR ALI SHALLWANI  
SECRETARY HEALTH**

No. S.O.(PM&I) 2-1/2011(CRC)

Karachi, dated. the 28<sup>th</sup> March, 2015

**C.C to:**

1. The P.S.to Chief Secretary Sindh, Karachi.
2. The Managing Director, Sindh Public Procurement Regulatory Authority, Karachi.
3. The Executive Director, NICVD, Karachi.
4. The Director General Health Services Sindh, Hyderabad.
5. The Additional Secretary (Admn/Development/Public Health), Health Department.
6. The Chairman & all members of the Committee.
7. The P.S. to Secretary Health Sindh.

  
( RASHID HUSSAIN )  
SECTION OFFICER (PM&I)

PHONE NO: 071-9310213 FAX 9310119.

OFFICE OF THE MEDICAL SUPERINTENDENT GHULAM MUHAMMAD MAHAR

MEDICAL COLLEGE HOSPITAL SUKKUR

HEALTH DEPARTMENT GOVERNMENT OF SINDH ANNUAL PROCUREMENT PLAN

(WORKS, GOODS, SERVICES)

Sr.#	Description of Procurement	Quantity (where Applicable)	Estimated Unit Cost (where applicable) Million	Funds allocated (million)	Source of funds (ADP Non ADP)	Proposed Procurement Method	Timing of Procurements				Remarks
							1 <sup>st</sup> QTR.	2 <sup>nd</sup> QTR.	3 <sup>rd</sup> QTR.	4 <sup>th</sup> QTR.	
1.	(Revenue Component ) ADP Scheme namely Establishment of 50 Bedded Medical & Surgical ICU with Expansion of Casualty & OPD Departments & Other Units at GMMMC Hospital Sukkur. (Machinery & Equipments, Furniture & Fixture)	Mentioned in the Tender Form	147.520(M)	147.520(M)	ADP	SPPRA Rules 2010 Clause 46(2) S	✓	✓	✓	✓	-----

  
MEDICAL SUPERINTENDENT  
GMMMC HOSPITAL SUKKUR

PROJECT DIRECTOR  
(Medical Superintendent)  
GMMMC Hospital Sukkur

**GHULAM MUHAMMAD MAHAR  
MEDICAL COLLEGE HOSPITAL,  
SUKKUR**

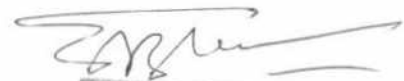
**Tender for Purchase of Machinery and  
Equipments, Furniture and Fixture and other  
items of ADP Scheme namely "50 Bedded  
Medical & Surgical ICU, Expansion of Casualty  
and OPD Departments at Ghulam Muhammad  
Mahar Medical College Hospital, Sukkur for the  
year 2016-17**

**Tender No. MS/GMCHS/SUKKUR/4236/40 03/04/17**

**Due on: 25-04-2017**



**PROJECT DIRECTOR  
(Medical Superintendent)  
GMMMC Hospital Sukkur**



**PROJECT DIRECTOR  
(Medical Superintendent)  
GMMMC Hospital Sukkur**



## INSTRUCTIONS TO BIDDERS

Tenders are required to comply all the clauses mentioned in the terms and conditions of the tender and any deviation/breach will forbid them from competing in the tender.

- 1) Bids shall remain valid for 90 days from the date of opening. A bid valid for a shorter period shall be rejected as being non-responsive.
- 2) Prices should be quoted on C.&F and D.D.P basis.
- 3) Price should be quoted in Figures & words both, failing which the offer will be ignored.
- 4) The Bidder shall prepare bid comprise one single envelope containing separately financial proposal and technical proposal in original. The Envelop shall be marked as **"FINANCIAL PROPOSAL"** and **"TECHNICAL PROPOSAL"** in bold and legible letter to avoid confusion.

In Technical Proposal the bidder must provide the original Data sheet and Technical brochure, Income Tax, Sales Tax, Sole Agency certificate and other documents; otherwise the bid will be ignored. **Attested photocopy of the earnest money should be attached with Technical Proposal but its value must not be disclosed and this can be achieved by placing a piece of paper on the place where amount is mentioned.**

- 5) The technical bid submitted by the Bidder shall comprise the following documents:
  - (a) Bid security (Photocopy of the earnest money without amount) attested.
  - (b) The original tender purchase receipt.
  - (c) Bidders shall purchase separate tender document and furnish purchase receipts for alternate offer, in case they want to submit alternate offer. Any item's bid with alternate offers without separate purchase receipt (Original) is supposed to be rejected.
  - (d) A detail data sheet having description of the essential technical and performance characteristics of the offered equipment.
  - (e) The original catalogue must accompany with offer and the equipment should comply/certified at CE/FDA (510 K) approved where asked.
  - (f) Only sole agent/distributor should submit their bid. No sublets are allowed.
  - (g) Sole agency certificate of the quoted item from the Manufacturer must be attached by the bidder with at least three years validity.
  - (h) The bidder shall furnish attested copy of valid Professional Tax (Excise & Taxation) Certificate/Income Tax Certificate/GST Registration Certificate.
  - (i) For X-Ray Machine, copy of PNRA certificate must be attached with technical bid.
  - (j) Bidder must submit the proof for the availability of workshop & trained engineers + qualified persons for the machines at Sindh for after sale service.
  - (k) The service manual with circuit diagram will be provided (for equipment)
  - (l) The bidder must confirm free Installation / Demonstration at consignee's end as specified, three years free Service from the date of installation and availability of spare parts for 10 years.
  - (m) The supplier will be bound to supply the price list of spare parts and consumable at the time of tender i.e. for three years.
  - (n) Bidder shall furnish to submit 3 years audit report of the company.
  - (o) Bidder shall furnish copy of chamber of commerce registration certificate.

- (p) Bidder shall submit last 3 years bank statement.
- (q) Bidder shall submit 1 year sales tax summaries/return.
- (r) Bidder shall submit 3 years income tax returns.
- (s) Bidder must conforming technical specification of equipment.
- (t) The supplier will be bound to provide free service during warranty period and to supply spare parts accessories of the supplied equipment on demand.
- (u) Bidder shall submit guarantee letter that the supplied Machinery / Equipment is the original / brand new product / latest model, none of the part is replaced, old or refurbished.
- 6) The financial bid submitted by the Bidder shall comprise the following documents:
- (a) The Bidder shall furnish a bid security @ 3% of the quoted value in the form of a pay Order.
- (b) Bid Form & Price Schedules duly completed by the Bidder.
- 7) The prices quoted by the Bidder shall be fixed during the performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price or conditional will be treated as non-responsive and rejected.
- 8) In case of imported items both C.&F & D.D.P prices should be quoted.
- 9) In case if the order is placed on C.&F, the bidder will establish Letter of credit in the name of Medical Superintendent, Ghulam Muhammad Mahar Medical College Hospital, Sukkur and bear L/C charges, custom clearance and Transportation to consignee end. Necessary certificate will be issued by the consignee, that the import has been made for the Hospital/health facility, so as to avail exemption of duties/taxes as per Government Rules.
- 10) In case of Purchase order issued on C.&F basis, the suppliers / contractor will be entitled / eligible to claim 80% of the purchase order amount from office of the District Account Office, on submission of the L/C in favor of the Consignee/Hospital. Balance 20% amount can be claimed after delivery of goods at consignee site by submission of original delivery challan.
- 11) In case of supply order placed on D.D.P basis the bidder should be supplied the quoted item on or before 31-05-2017.
- 12) All the (applicable) Government taxes (Income Tax / Stamp Duty) of the value of the contract amount will be deducted from the bills of the Contractors / Suppliers.
- 13) The purchaser will open only the envelopes marked "**Technical Proposal**" in the presence of Bidders or their representatives who chose to be present at the time of bid opening date, time and place specified in the tender documents. The Bidder or their representative who are present shall sign the attendance sheet.
- 14) Initially the bids will be scrutinized on basis of required documents mentioned in instructions to bidder and general terms and conditions of the tender. Only those bids will be further evaluated on the basis of technical specification that are qualified in the initial scrutiny.



- 15) The envelope marked "**Financial Proposal**" shall be retained in the custody of purchaser without being opened till the completion of the Technical Evaluation.
- 16) Initially the bid evaluation will be performed after that Technical Specification will be evaluated by Technical Committee on the basis of the data sheet and the literature provided / submitted by the firm. Financial bids of technical qualified firms will be opened.
- 17) The equipment offered must be of latest version / generation and in case an old model is offered, it will not be considered, even though it is as per the tender specifications.
18. All pages of the bid, except for un- amended printed literature, shall be initialed by the person or persons signing the bid.
19. The bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the bid.
20. Bids shall be submitted either by the manufacturer or its sole agent, if submitted by the manufacturer itself then bid of authorized sole agent will be rejected. No sublet will be allowed.
21. Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, its bid will be rejected.
22. The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract under the relevant provisions of SPP Rules 2010 (Amended 2013), without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser's action.
23. The Purchasers reserves the rights to increase or decrease the quantity as per SPP Rule-2010 (Amended 2013).
24. Prior to the expiration of the period of bid validity, the Purchaser will notify the successful Bidder through Advance acceptance. This will constitute the formation of the contract. Within seven (07) days after receipt of the Advance acceptance, the successful Bidder shall furnish the performance security @ 3% of the contracted amount and will sign the contract agreement.
25. Bid validity can be extended as per SPP Rule 2010 (Amended 2013).
26. Distributor once nominated by the manufacturer will be for the whole contract period and manufacturer cannot change its distributor during the year in any case. In exceptional cases the tendering authority may approve changes.

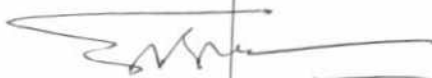


**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMHC Hospital Sukkur

27. The warranty period will commence from the date of commissioning of the unit as per report of the end user/technical person.
28. The system will have the minimum uptime 95% in case of down time beyond this period the following penalty will be applied:
- 95% to 100% No penalty.
  - 90% to 95% the warranty period will be extended by the number of days system in down.
  - 85% to 90% warranty period will be extended 1.5 time the down time period.
  - 80% to 85% warranty period will be extended two time for the down time period and supplier is supposed to give justification of delay.
  - Uptime less than 80% hospital will complain to the Principal to take action against the supplier and warranty will be the three time for the down time period.
  - However, PPM (Periodic Preventive Maintenance) will not consider in the down time and PPM of the system will be done as per manufacturer recommendation.

### **General & Special Conditions of Contract**

- The Contract shall be governed by and interpreted in accordance with laws of the Islamic Republic of Pakistan.
- Store is required immediately. The bidder may however give their short guaranteed delivery period by which the supply will be completed but not later than 45days from date of purchase order. No Extension will be granted / accorded for the supply.
- The manufacturer should provide an undertaking that if his authorized contractor fails to carry out any assignment in total or in part, manufacturer will be responsible to carry out the same.
- Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor.
- The Contract Price shall be made to the Contractor as specified in the Contract Agreement, subject to the general principle / procedure of the Government of Sindh.
- The Contract shall be executed in accordance with the Contract Documents and procedures.
- The Purchaser or its representative shall inspect the Machinery / Equipment to confirm their conformity to the Contract specification. The inspection will be conducted at the premises of consignee after receipt of supply.
- If the Contractor fails to attain Completion of the supply or installation within the Time for Completion shall pay to the Purchaser liquidated damages at the rate of 2% per month (0.5% per week) of the Contract Price, or the relevant part thereof. The aggregate amount of such liquidated damages shall in no event exceed the amount of 10%. Once the "Maximum" is reached, the Purchaser may consider termination of the Contract.



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GMMHC Hospital Sukkur

- 9) The Contractor warrants that the supplied equipment or any part thereof shall be free from defects in the design, engineering, materials etc. In case of defect in any part at the time of supply of installation it shall be replaced with new one instead of repair.
- 10) The purchaser, without prejudice to any other remedy for breach of contract by written notice of default sent to the supplier, may terminate this contract in whole or in part:
  - (a) if the supplier fails to deliver any or all of the contracted items within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser.
  - (b) If the Supplier fails to perform any other obligation(s) under the Contract.
  - (c) If the supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- 11) The bidder shall confirm the refund of cost difference if the same goods is/was supplied at lower rates to any other Govt./Semi Government institution or Armed Forces in the Province or outside in the same fiscal year.
- 12) The Purchaser reserves the right to increase/decrease or delete the quantities of goods etc. at the time of award of contract and also reserves the right to increase/ decrease the quantity of goods and services originally specified in the contract without any change in unit price or other terms and conditions of goods at any time during the contract period.
- 13) Service charges @ current prevailing charges of the value of the Contract will realized/charged by the A.G. Sindh, while making payment to the contractors for award of each contract.
- 14) Technical Specification may be altered by the Chairman Procurement Committee at any stage of Tender Process.



**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMMC Hospital Sukkur

# Evaluation Criteria

## Bids will be evaluated as follows:

### **Initial scrutiny of documents of machinery and equipments.**

- i. Copy of Earnest money without amount .
- ii. Original tender purchase receipt/receipts for alternate offers.
- iii. Compliance of terms and conditions.
- iv. Submission of required documents in instructions to bidder and general terms and conditions of tender.

### **Technical Evaluation**

Only those bids will be evaluated technically that are qualified in initial scrutiny of documents.

### **Furniture & Fixture**

Vendors will have to submit the samples of quoted furniture for technical evaluation and quality assessment.

### **NOTE :**

- i) **Technical and Financial proposals of furniture, fixture and other items should be submitted separately from Machinery and equipments in separate envelopes.**
- ii) **Bidders of furniture and other items shall submit samples of quoted items on demand for sample verification otherwise bid may be ignored due to short period of closing of financial year.**
- iii) **The evaluation criteria of furniture and fixture is as under.**

1. Attested Copy of Earnest money without amount.
2. Original tender purchase receipt/receipts for alternate offers.
3. GST Certificate.
4. NTN Certificate.
5. Chamber of Commerce Certificate.
6. Professional Certificate.
7. Annual Turn Over in Million (proof).
8. Bank Statement last three years.
9. Audited report last three years.
10. Income tax return of last three year.
11. GST summaries of last twelve months.
12. Relevant Experience (proof).
13. Brochure of Quoted items (compulsory).

### **Financial Evaluation.**

- i. Financial offers of only those bidders will be opened that are qualified in technical evaluation.
- ii. Original pay order
- iii. Amount of bid security at the rate of 3% of total bid amount.
- iv. Quoted price on original tender form.



**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMHC Hospital, Guwahati

# UNDERTAKING

- a) That I/we agree whether our tender accepted for total, partial or enhanced quantity for all or any single item. I/We also agreed to supply and accept the said item at the rates for the supply of contracted quantity within the stipulated period shown in the contract.
- b) I/We understand and confirm the refund of cost difference if the same goods is/was supplied at lower rates to any other Govt. /Semi Govt. institution in the province in the same fiscal year.
- c) I/We undertake that, if any of the information submitted in accordance to this tender Enquiry found incorrect, our contract may be cancelled at any stage on our cost and risk.

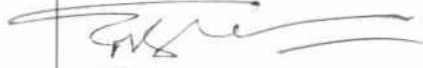
## CERTIFICATE

We guarantee to supply the stores exactly in accordance with the requirement specified in the invitation to this tender.

Signature of Bidder: \_\_\_\_\_

Name & Designation: \_\_\_\_\_

Address: \_\_\_\_\_



**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMMC Hospital Sukkur



**PROJECT DIRECTOR**  
(Medical Superintendent)  
GMMMC Hospital Sukkur


**ANNEXURE ( A )**

**LIST OF MACHIENRY / EQUIPMENTS FOR ESTABLISHMENT OF 24  
BEDDED MEDICAL ICU AT GMC HOSPITAL SUKKUR**

<b><u>TECHNICAL OFFER</u></b>			<b>IMPORTANT</b> Please write YES / NO or deviation if any
S. NO:	Name of Items	Quantity	
1	<p><b><u>Ventilators</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- ICU Ventilator for peads and neonate and Adults.</li> <li>- Invasive and non-invasive techniques.</li> <li>- 12" or more Touch screen display with internal compressor. Battery back up support for 2 hours or more.</li> <li>- Modes of ventilation: Assisted Control Mandatory Ventilation (CMV).</li> <li>- Synchronized Intermittent Mandatory Ventilation (SIMV).</li> <li>- Spontaneous Ventilation.</li> <li>- Volume-controlled.</li> <li>- Pressure-controlled.</li> <li>- Volume Targeted Pressure. controlled</li> <li>- Apnea Backup Ventilation</li> <li>- Active Exhalation Valve</li> <li>- Automatic Leak Compensation</li> <li>- Tidal volume 20 - 2000 ml or better</li> <li>- Respiratory rate 0 - 150 bpm.</li> <li>- Pressure control : 20~60 cm H2O or better</li> <li>- Pressure support : 0~60 cm H2O or better</li> <li>- Peak flow 1-120lpm or better .</li> <li>- Inspiratory time: 0.1 ~ 8sec or better</li> <li>- Oxygen concentration: 21-100%</li> <li>- ICU Vent is 10.4" LCD Color display with auto light sensor. (Auto, Dark, Medium, Bright) and clearly defined control buttons areas for Ventilation, Vital parameters and system control.</li> </ul>	12	



- ICU Station Ventilator with triple processor control
- ICU Station Vent provides the highest pneumatic driven ventilator performance & vital signs monitoring in one.
- Vent supports spontaneous breathing trials to access the ability of a patient to breathe unaided.  
CPAP/PSV,BILEVEL,M,SIMV(pressure controlled/volume controlled),PRVC(pressure Regulated Volume Control),A/C (VC/PC).Apnea backup ventilation-all signs of spontaneous breathing are always controlled and supported in any ventilation mode.
- The ICU Station which Monitors & Display Graphs and figures for such vital parameters as 3/5 lead ECG (ST Analysis, Arhythmia, SPO2, 2x Temp, NIBP, and 2 x IBP.
- The device offers modern Invasive & non Invasive Ventilation with maximum comfort for adult & pediatric patients
- Ergonomic & slim space saving design allows various mounting options
- Automatic TC (Tube Compensation)Tracheal Tube Cuff pressure control regulation
- Built in intelligent pneumatic medication nebulizer system automatically activated during 75% of the aspiratory.
- Fast and precise oxygen measurement by laser absorption spectroscopy method.
- Exchangeable autoclave able aluminum plug in cassettes.
- All ventilation modes maintain assisted spontaneous breathing and show P.01 and intrinsic PEEP
- Possibility to choose between interval and continuous NIBP measurement
- Display parameter : Delivered oxygen concentration 21-100%
- Trend data up to 72 hours or more.,
- More than 40 parameter display.
- Real time graphic, volume vs time, flow vs time, pressure vs time, flow volume loop, pressure volume loop.
- Comprehensive alarm for patient disconnection, low tidal volume, battery failure, breath rate, low pressure, etc.
- Graphics Display

  
 PROJECT DIRECTOR  
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	<ul style="list-style-type: none"> <li>- Apnea Back-up</li> <li>- Humidification Selection (HME, Humidifier, and None)</li> <li>- User Defined Custom Default Settings</li> <li>- Complete with humidifier, patient circuit disposable 50 nos./unit.</li> </ul> <p>USA/UK/EEC or equivalent</p>		
2	<p><b><u>Monitors Multi-Para</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- Non fade colored touch LCD display monitor from 10" to 12" or more with minimum 4 trace capability or more preferable with excellent mobility.</li> <li>- Built-in ECG, NIB, Respiration, Temperature and Spo2 measurement etc. with all standard accessories including washable and reusable Spo2 probe.</li> <li>- Adult, Neonatal &amp; pediatric modes of operation, detection and alarms for all parameters</li> <li>- Waveform display 7 to 10 or more.</li> <li>- 12 lead ECG analysis and display.</li> <li>- Wave form trace speed : 25 and 50mm/sec</li> <li>- Color TFT touch screen display.</li> <li>- Size/ Dimensions: 13" x 15" Or better.</li> <li>- Manual/Automatic/Continuous measurement of NIBP</li> <li>- SpO2</li> <li>- 3/5/ 12-lead ECG waveform synchronously displays high precision ECG measurement technology, assisting in precise diagnosis of patients.</li> <li>- Intelligent alarm management allows auto identification of alarm level and self-adjusts proper alarm time to reduce false alarms.</li> <li>- Network capability</li> <li>- USB interface available.</li> <li>- Monitor should have rechargeable battery allows for over 4 hours of continuous working time or better</li> <li>- Monitor should be quoted with 2 X IBP , Cardiac Output And ETCO2 (optional)</li> </ul> <p><b><u>ECG</u></b></p> <ul style="list-style-type: none"> <li>-</li> <li>- Algorithm optimized for arthymia detection.</li> <li>- 12 lead diagnostic algorithm with 200 kind of analysis results.</li> <li>- Leads selection: I, II, III, aVR, aVF, aVL, V, V1-V6, TEST</li> </ul>	25	

- Selectable neonatal & pediatric operation
- Ability to detect neonatal & pediatric heart rate range, qrs widths and amplitudes.
- Numeric heart rate
- Real time wave form
- Variable gain: 0.5,1,2&4
- Heart beat indication

NIBP

- Algorithm optimized for cardiac patients, hypertensive patients and neonatal patients. Algorithm with intelligent Co2 pseudo wave identification technology with VGA/ DVI output should be as standard in unit.
- 1200 sets of NIBP measurement and 60 alarm events
- Pressure ,oscillometric principal.
- Systolic , diastolic and mean pressure
- Rising cuff/continuous pressure display

Temperature:

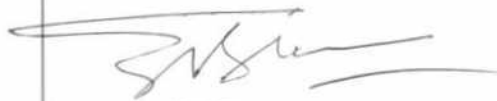
- Numeric temperature selectable in centigrade or Fahrenheit scale.
- Temperature with probe (external and rectal)
- Ability to measure neonate and pediatric temperature range

Pulse Oximeter

- Number oxygen saturation measurement
- Range: 0-100%
- Motion Tolerance Technology
- Sensor for neonate/infant and pediatrics
- Respiration impedance method using ECG leads for sensing.
- Breathing rate range, sweep speed
- Selectable apnea alarm
- Built-in battery with charger for at least 2 hours or more
- The system must be complete with all sensors, probes and cables and accessories required for measuring all above selected parameters for adults/paeds and neonatal.
- Following parameter should be quoted as optional:  
2 -IBP, EtCo2 and cardiac output.

Respiration:


- Breathe rate display and alarms
- Sweep speed, 12.5 to 50 mm/sec.
- Trend data 72 hours trend graphical and tabular
- Alarm High & Low settable on all parameters
- Visual and audible indication of alarms
- Apnea time 5-40s



*	<ul style="list-style-type: none"> <li>- Ac 220 volt /50Hz operating requirement</li> <li>USA/UK/EEC/Japan or Equivalent</li> </ul>		
3	<p><b><u>Defibrillator:</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- Biphasic transthoracic (external) defibrillator with display of 5.5" screen or more.</li> <li>- Synchronized output with ECG</li> <li>- Control of energy charges / delivering on main panel and apex paddle.</li> <li>- Charging indicators</li> <li>- The energy range should be adjustable for peds and adults up to 200J or more.</li> <li>- Charging time for full energy should be less than 7 sec.</li> <li>- Display of heart rate, ECG through paddles and lead I,II&amp; III patient cables.</li> <li>- 360 J energy, Biphasic Waveform Technology</li> <li>- 7" color graphic TFT LCD display or better.</li> <li>- Built-in standard 12-lead ECG</li> <li>- Synchronous or asynchronous mode</li> <li>- Semi-automatic (AED) or manual control</li> <li>- Operation from paddles</li> <li>- Short charging time less than 5 sec or better</li> <li>- Charging time for fast action start from 2.7 secs to 200 J , 4.5 secs to 360 J</li> <li>- Alarm functions</li> <li>- Should have 3-channel high-resolution recorder or better.</li> <li>- Should have <b>Pacemaker with Mode Demand (VVI), Fixed Rate (VVO), Type Transthoracic non-invasive, Waveform Rectilinear, constant current</b></li> <li>- Pulse Width 40 msec, Current Amplitude 0 and 20..200 mA, 1 mA resolution</li> <li>- Rate 30..200 ppm, 1 ppm resolution</li> <li>- Patient Impedance Range 0..1000 ohms with indicator</li> <li>- Should have Optional upgradeable for ETCO<sub>2</sub> , SpO<sub>2</sub>, NIBP</li> <li>- Should have available option any time upgradeable for electrodes for internal defibrillation.</li> <li>- Battery Capacity More than 5 hours continuous monitoring or 200 shocks at 200J Indicator 5-stage indicator on screen and LED indicator when turned off, Must be Charge time Less than 2 hours for full charge.</li> </ul>	6	

  
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*	<ul style="list-style-type: none"> <li>- Report Browser Software On PC, from exported USB data.</li> <li>- Built-in recorder for printing of full summary of standard 50mm paper.</li> <li>- Alarm for high and low heart rate, low battery warning.</li> <li>- Built in rechargeable battery with charges for more than 100 shocks</li> <li>- Auto test/self-check</li> <li>- External pediatric and adult paddles.</li> <li>- ECG cable</li> <li>- AED facility with cable.</li> <li>- AC 220V/50Hz operated</li> </ul> <p>Accessories:</p> <ul style="list-style-type: none"> <li>- Supplied with defibrillator</li> <li>- Battery with 4 years shelf life</li> <li>- External paddle adult &amp; child</li> <li>- EC Cable – 3 leads</li> <li>- Ultrasound gel</li> <li>- Electrodes pack</li> <li>- AED Pads- Adult /pediatric</li> <li>- USA/UK/EEC/Japan or Equivalent</li> </ul>		
4	<p><b><u>Infusion Pumps</u></b></p> <p><b>Specification:</b></p> <ul style="list-style-type: none"> <li>- Microprocessor controlled with back LIT graphic &amp; coloured LCD display.</li> <li>- Audible and visible alarms for occlusion (upper &amp; lower), complete, low battery, door open, malfunction, bubble.</li> <li>- Infused volume &amp; volume max: limit range 1- 999.9ml</li> <li>- Volumetric peristaltic infusion pump.</li> <li>- Flow rate 0.1 to 99.9 ml/h.</li> <li>- Unit compatible with most IV set.</li> <li>- Memory function in case of power failure to retain the most recent flow rate &amp; total volume.</li> </ul> <p><b>Rate</b> 0.1 - 999.9 ml/h in 0.1 ml/h step</p> <p><b>Selection infusion volume</b> 0.1 - 9999 ml in 0.1 ml step up to 999.9 ml, 1 ml steps above</p> <p><b>Infusion time selection</b> 1 min - 99 h 59 min in 1 min step</p> <p><b>Program rate &amp; volume</b> ml/h &amp; ml</p> <p><b>Program volume &amp; time</b> ml &amp; h.min (pump calculates flow rate)</p>	25	

  
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*	<b>Bolus rate</b>	0.1 - 1200 ml/h programmable without flow interruption	
	<b>Bolus volume</b>	0.1 - 999 ml programmable without flow interruption (automatic & manual)	
	<b>Purge rate</b>	1 - 1200 ml/h	
	<b>Accuracy</b>	± 5% (set dependent / depend de la tubulure)	
	<b>Air bubble detector</b>	50 - 1000 µl (configurable)	
	<b>Air bubble accumulation</b>	100 - 2000 µl (50 µl steps) within 8 - 64 min (8 min. steps), configurable	
	<b>Drop detector</b>	10 - 65 drops/ml (configurable)	
	<b>KVO (Keep Vein Open rate)</b>	0.1 - 3 ml/h	
	<b>Pump calibration</b>	yes / oui / ja (software guided)	
	<b>Occlusion pressure limit</b>	100 - 1000 mbar (10 steps programmable without flow interruption)	
	<b>Occlusion pressure reduction</b>	yes / oui	
	<b>History</b>	> 200 Events	
	<b>Drug library</b>	> 50 médicaments / drugs	
	<b>Staff alerting system</b>	24 V / 0.2 A (static or dynamic potential free relay contact)	
	<b>RS-232 interface galvanic isolated</b>	yes / oui	
	<b>Mains power supply</b>	230 VAC ±10%, 50/60 Hz , opt. 115 V 60 Hz, 12 VA , or 20 VDC / 0.3A, II	
	<b>Protection class</b>	Type CF	
	<b>Applied part</b>	IIb	
<b>MDD classification</b>			
<b>Battery</b>	NiMH (maintenance free / sans entretien)		
<b>Battery operation</b>	Typ. 5 h @ 25 ml/h		
<b>Battery charge time</b>	15 h		
<b>Dimensions</b>	190x160x130 mm (W x H x D) excl. clamp		
<b>Housing</b>	ASA (high performance plastic)		
<b>Operating temperature</b>	5° - 40° C		
<b>Relative humidity</b>	20 - 90% no condensation /		



	<p><b>Protection</b></p> <p><b>Weight with battery</b></p> <p><b>Approvals</b></p> <ul style="list-style-type: none"> <li>- Comprehensive alarm for Air in line, occlusion, door open, low battery, infusion complete, empty container.</li> <li>- Built in battery with battery charger.</li> <li>- Unit complete with 10 nos. IV sets.</li> <li>- Moisture protection IP 22, drip protected for horizontal usage</li> <li>- Buzzer level of 3 steps history call back upto 10 data.</li> <li>- Lifetime minimum 10 years under continuous duty conditions.</li> </ul> <p>USA/UK/EEC/Japan or Equivalent</p>	<p>sans condensation IPX2 2.0 kg</p> <p>CE0120, EN 60601- (1, 1-2, 1-4, 2-24), EN 61000-3- (2, 3)</p>		
5	<p><b><u>AB G Machine</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- It should measures Blood Gas (Full parameters in its addition to measure.</li> <li>- Eletrolyes like Na<sup>+</sup>, K<sup>+</sup>, Cl<sup>-</sup>, pH, pO<sub>2</sub>, pCO<sub>2</sub> and Haemotocrit.</li> <li>- Calculated Parameters TCO<sub>2</sub>, HCO<sub>3</sub>, Base Excess A-aDO<sub>2</sub> Buffer Base etc.</li> </ul> <ul style="list-style-type: none"> <li>• Measured parameters: pH, pCO<sub>2</sub>, pO<sub>2</sub>, Hb</li> <li>• Specimen: whole blood, serum, plasma, Dialysate</li> <li>• Analysis time: 50 seconds</li> <li>• Display: Minimum 12 inch color display / touch panel</li> <li>• Entered parameters: Patient I.D, Sex, Age</li> <li>• Calibration: Automatic, programmable 1 &amp; 2 point calibration</li> <li>• Data storage: 10,000 samples OR more</li> </ul>		1	



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	<ul style="list-style-type: none"> <li>• Printer: Built-in Printer</li> <li>• Barcode: Built-in (Readability more than 10 kinds of barcode)</li> <li>• Built-in battery backup.</li> <li>• Interface: TCP/IP</li> <li>• Maintenance free electrodes</li> <li>• Operating temperature: 10-30 C <ul style="list-style-type: none"> <li>- Maintenance free electrode and the unit should be control</li> <li>- Onboard life of reagents should not be less than one month</li> <li>- System should be supplied complete with all standard accessories, electrodes.</li> </ul> </li> </ul> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>		
6	<p><b><u>U / Sound Machine</u></b></p> <ul style="list-style-type: none"> <li>- Fully digital Ultrasound System</li> <li>- Should be of 10-15" with an adjustable screen LCD.</li> <li>- Applications OB, Abdomen ,Urology ,small parts, Vesicular Anesthesia, Emergency, ICU etc</li> <li>- Modes B,2B,M</li> <li>- Should have various examinationmode with alterable preset settings and single button image optimization.</li> <li>- Should be compatible with multiple Regions transducers</li> <li>- Data storage capability with multiple file formats storage systems</li> <li>- Should have USB port for image and reports transportation Should be capable of recording cinematic view of image with clipboard</li> <li>- Tissue harmonic imaging</li> <li>- Chroma/trapezoid imaging</li> <li>- Shortcut buttons for calculation</li> <li>- Should be with battery and built-in UPS/stand alone ups to provide continuous scanning without electrical supply</li> </ul>	1	

	<ul style="list-style-type: none"> <li>- Should be complete with battery backup</li> <li>- Two(2) probe connections Convex Probe Multi frequency 2.0 MHz-6.0MHz or equivalent</li> <li>- Linear Probe Multi frequency 5.0 MHz- 11.0 MHz or equivalent</li> <li>- Thermal printer with 5 nos. paper roll.</li> <li>- Trolley (local)</li> <li>- CE and FDA Approved 510K approved</li> </ul> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>																		
7	<p><b><u>Double Oxygen line &amp; Double Air Line system</u></b></p> <p><b><u>CENTRAL MEDICAL GASES SYSTEM</u></b></p> <p>Supplying / Installation of complete Medical Engineering System Comprising of: -</p> <p><b><u>COPPER PIPE</u></b></p> <ul style="list-style-type: none"> <li>• Imported Copper Pipe 18 Swg. de – Oxidised, de – greased, half – hard, solid drawn with required copper fittings as follows: -</li> </ul> <table style="margin-left: 40px;"> <tr> <td>Size</td> <td>1"</td> <td>-</td> <td>Rft.</td> </tr> <tr> <td></td> <td>3/4"</td> <td>-</td> <td>Rft.</td> </tr> <tr> <td></td> <td>1/2"</td> <td>-</td> <td>Rft.</td> </tr> </table> <ul style="list-style-type: none"> <li>• <b><u>OUTLET POINTS</u></b> Medical Gases Outlet Points, Surface Type, wall – mounted In accordance with the Healthcare Technical Memorandum HTM 2022 <ul style="list-style-type: none"> <li>- Oxygen Outlet</li> <li>- Air Outlet – 4 bar</li> <li>- Nitrous Oxide</li> <li>- Vacuum Outlet Points</li> <li>- Air Outlet 7 bar</li> </ul> <b>(U.K/U.S.A/JAPAN)</b> </li> <li>• <b><u>ISOLATION VALVES</u></b> Isolation Valves with adaptor. Size <table style="margin-left: 40px;"> <tr> <td>3/8"</td> </tr> <tr> <td>1/2"</td> </tr> <tr> <td>3/4"</td> </tr> <tr> <td>1"</td> </tr> </table> <b>(U.K/U.S.A/JAPAN)</b> </li> <li>• <b><u>MEDICAL AIR PLANT SYSTEM</u></b></li> </ul>	Size	1"	-	Rft.		3/4"	-	Rft.		1/2"	-	Rft.	3/8"	1/2"	3/4"	1"	Central	
Size	1"	-	Rft.																
	3/4"	-	Rft.																
	1/2"	-	Rft.																
3/8"																			
1/2"																			
3/4"																			
1"																			

  
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Oil Free Air Compressor System

Comprising of: -

- I) 02 Nos. Air Compressor System  
**15 HP** (One in use and other stand by)
  - II) 02 Nos. Refrigerated Air Dryers
  - III) 02 Nos. Pre- Air Filter (5 Micron)
  - IV) 02 Nos. After Air Filter (1 Micron)
- (U.K/U.S.A/TAIWAN/KOREA/JAPAN)**

- **BY PASS SYSTEM**

By pass system with  
Network of pipeline system and  
Isolation Valves to connect the stand  
By Compressor and refrigeration dryer  
In case of emergency. (LOCAL)

- **CONTROL PANEL**

Change over electric control panel  
Complete with installation for  
Compressor and Dryer.  
(LOCAL)

- **OXYGEN SUPPLY MANIFOLD**

The Manifold is a to switch from bank in use to  
reserve  
Bank without fluctuation in delivery supply line  
pressure  
and without the need for external power. After the  
switch-over  
the "reserve" bank becomes the "bank in use" and the  
bank in  
use becomes the reserve bank.  
The system is able maintain continuous supply  
1500LPM  
Capacity (2 x 10) with capacity of 180 M3/H set of  
conection  
for cylinders/Hp. Valves , discharging valves, tell pipe  
**Make: Local with Imported parts**

- **NITROUS OXIDE MANIFOLD (LOCAL)**

The Manifold is a to switch from bank in use to reserve  
Bank without fluctuation in delivery supply line pressure  
and without the need for external power. After the switch-  
over  
the "reserve" bank becomes the "bank in use" and the  
bank in  
use becomes the reserve bank.  
The system is able maintain continuous supply 1500LPM  
Capacity (2 x 4) with capacity of 50 M3/H set of conection  
for cylinders/Hp. Valves , discharging valves, tell pipe  
**Make: Local with Imported parts**

	<ul style="list-style-type: none"> <li>• <b><u>ZONE SERVICE UNITS (LOCAL)</u></b> Zone Service Unit complete box With Imported Isolation Valve and adaptor.</li> <li>• <b><u>MEDICAL GAS ALARM</u></b> Supplying and installation of Alarm  System of different Gases With mute / test facility, gives Sound and flash light whenever The pressure in line decreases The set pressure for individual Gas i.e - Oxygen - - Medical Air 4 bar - (LOCAL)</li> <li>• <b><u>FLOWMETER SET</u></b> Oxygen Flowmeter 0 – 15 LPM Complete with Humidifier and probe (U.K/U.S.A/JAPAN)</li> <li>• <b><u>SUCTION INJECTOR UNIT</u></b> Complete with 02 Ltrs (2000ml) Collection jar and probe (U.K/U.S.A/JAPAN)</li> </ul>		
8	<p><b><u>Double vacuum system</u></b></p> <p>(Compatible to central oxygen system)</p> <p>-THE SYSTEM SHOULD BE JOINT WITH SURGICAL ICU.</p>	Central	
9	<p><b><u>Crash trolley</u></b></p> <p><b><u>CRASH CART TROLLEY :</u></b> Dimensions are 26.5"W x 32"D x 44.25"H.</p> <p><b><u>CART INFORMATION:</u></b></p> <ul style="list-style-type: none"> <li>• Solid molded top/handle (WORK SURFACE IS A TOTAL OF 19.50" W x 21"D)</li> <li>• Sliding work surface (ADDITIONAL WORK SURFACE IS A TOTAL OF 11.25")</li> <li>• Full extension see-thru drawer trays</li> <li>• Removable and transportable trays</li> <li>• Ball bearing slides</li> <li>• Adjustable door storage</li> <li>• Instant access-one touch breakaway seal</li> </ul>	4	

  
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	<p>C AA N AA <b>Order No.</b> 5525 5526 5527 5523 Distributed by: <b>Stainless Steel Reusable Blade</b></p>		
13	<p><b><u>Ambo Bag</u></b> <b>TECHNICAL SPECIFICATION:</b> Bag volume: Adult (1475 ml), Pediatric (635 ml), Neonate (220 ml) Dimensions: Adult (295x127 mm), Pediatric (234x99 mm), Neonate (165x70 mm) Weight: Adult (350 g), Pediatric (230 g), Neonate (112 g) (including reservoir and mask)  Additional detailed specification can be found in the datasheets.  <b>UK/USA/JAPAN/TAIWAN or equivalent</b></p>	05	
14	<p><b><u>B.P Apparatus</u></b> The maximum number of cuff inflations for each SP in the mercury measurement is <b>five</b>, counting all MIL attempts and blood pressure attempts. The rationale for this is twofold: to minimize the discomfort to the SP of frequent cuff inflations and to accomplish data collection for this measurement within the time allowed.  <b>UK/USA/JAPAN/EUROPE or equivalent</b></p>	20	
15	<p><b><u>Food trolley</u></b></p> <ul style="list-style-type: none"> <li>- Latest Technology</li> <li>- Good quality</li> <li>- Standard Size</li> <li>- State of the art manufacturing</li> <li>- Brochure must be provided</li> <li>- Must be portable easily with Trolley tyres</li> <li>- Breakfast, Lunch and Dinner Oriented</li> </ul>	05	



**BIPEP Ventilators****Specification:**

Meeting the demands of fast-paced hospitals premium non-invasive ventilator series (with invasive capabilities) for patients with changing ventilatory needs or progressive respiratory conditions, including chronic obstructive pulmonary disease (COPD), neuromuscular disease (NMD) and obesity hypoventilation syndrome (OHS). It is packed with technologies to deliver a versatile ventilation solution, but not at the expense of easy setup and use. Taking into consideration the busy hospital environment and typical workflows, Its intuitive menus simplify the setup process, while its real-time data display makes monitoring quick and always available. Providing the modes you'd expect to see for excellent positive pressure ventilation, it also includes the auto-adjusting, volume-assured mode, iVAPS, with an intelligent Backup Rate, and optional AutoEPAP feature – delivering what we call IntelligentAir.\*

IntelligentAir continuously monitors and automatically adjusts to deliver personalised therapy to patients with changing ventilatory needs.

**FEATURES:**

- **Integrated oxygen:** up to 30 L/min
- **High pressure delivery:** up to 40 cm H<sub>2</sub>O at the mask
- **Extensive alarms:** including FiO<sub>2</sub> and SpO<sub>2</sub> to provide added assurance for 'at risk' patients
- **Paediatric use:** for children weighing down to as little as 13 kg
- **Pass-over or CounterStream™ humidification:** heated humidification with the H4i™ or HumiCare™ D900
- **Dual programs:** set and save up to two programs per patient for day/night ventilation or rest/active periods
- **Personalised efficacy and comfort:** using the following features, you can easily fine-tune settings on a patient-to-patient
- **intelligent Volume-Assured Pressure Support (iVAPS):** Targets each patient's alveolar ventilation
- **intelligent Backup Rate (iBR):** Provides backup breaths only when needed to give patients a chance to spontaneously trigger the ventilator
- **AutoEPAP:** Auto-adjusts the expiratory pressure in response to partial and full upper airway obstructions.

**TECHNICAL SPECIFICATION:**


Modes: iVAPS (intelligent volume assured pressure support with



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	ST (Spontaneous-Timed) PAC (Pressure Assisted Control) CPAP (Continuous Positive Airway Pressure) S (Spontaneous) T (Timed)		
Pressure range	IPAP: 2-40 cm H2O EPAP: 2-25 cm H2O		
TiControl™	Ti Max 0.3-4 sec Ti Min 0.1-Ti Max		
Respiratory Rate	5-60 bpm		
Rise Time	Min, 150-900 msec (approx.)		
Trigger and Cycle	Five sensitivity settings		
Adjustable alarms	High Leak Low Minute Ventilation Low and High Pressure Low and High Respiratory Rate Apnoea Low and High FiO2 Low SpO2 Non-vented mask		
Standard fixed alarms	Circuit disconnected Over pressure Blocked tube Internal battery empty		
Dimensions (LxWxH)	230 x 170 x 120 mm		
Weight	2.1 kg		
Air filter	Electrostatic fibre mesh		
Air outlet	22 mm taper, compatible with ISO5356-1:2004		
Internal battery	Lithium-ion, 2 hours at EPAP 5, IPAP 15, 20 bpm		
Power supply	AC 100-240V 50-60Hz, 2.2A AC 110V 400Hz, 2.2A DC 24V/3A		
IEC 60601-1 Classification	Class II (double insulation) Type BF Continuous operation		
<b>COMPONENTS:</b>			
· Main unit			
· Tube			
· Full face Mask			
· Operation Manual			
· Power cord			
· Carrying Bag			
<b>Country of Origin: USA/Australia/JAPAN or Equivalent</b>			

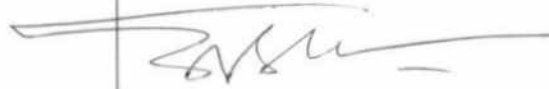
	<b>Certifications: CE/FDA</b>		
17	<p><b><u>Warmer</u></b></p> <p><b>TECHNICAL SPECIFICATION:</b>  Supply voltage: Warmer; 15 VDC @ 2.6A  Medical Grade power supply: 100 – 240 VAC @ 1.0A  Operating frequency: 50 to 60 Hz  Fuse: 4A Fast blow 250V.  Connector: IEC-320 3 terminal AC mains inlet. The ground terminal does not supply a protective earth connection to the device. The connection is a functional earth connection only.  Heat transfer method: Dry Heat  Time to heat from 23°C to usable range (33 – 37°C): 30-40 minutes  High temperature protection set point: 37°C  Transportation and Storage  Temperature: Operation mode: +41°F to +104°F (+5°C to +40°C)  Storage and transportation: -13°F to +131°F (-25°C to +55°C)  Humidity: Operation mode - 30% to 75% non-condensing  Storage: 10% to 95% non-condensing  Elevation: 0 to 10,000 feet</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	2	
18	<p><b><u>Blood warmer</u></b></p> <p><b>TECHNICAL SPECIFICATION:</b></p> <ul style="list-style-type: none"> <li>• Dry heat warming system</li> <li>• Efficient warming from 0 to 600 ml/min</li> <li>• Automatic and without adjustment</li> <li>• Fixed temperature instruction: 41°C</li> <li>• Exit temperature display</li> <li>• LCD display screen</li> <li>• Exit temperature level alarm</li> <li>• Well positioning bag detector</li> <li>• Monitoring of regulation probes</li> <li>• Monitoring of heating plate temperature</li> </ul> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	2	
19	<p><b><u>Nebulizer Machine</u></b></p> <p><b>TECHNICAL SPECIFICATION:</b>  Ultrasonic energy for uniform and highly dense 1-5 microns.</p>	12	

  
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	<ul style="list-style-type: none"> <li>▪ More than 96% of 0.3 micron or larger air borne dust particles is effectively shut out with the air filter to provide purified air for aerosol nebulization. Medication cup with replaceable diaphragm.</li> <li>▪ Easily detachable fan cover and pneumoclean (Air filter).</li> <li>▪ Made of highly resistant sterilizable resin.</li> <li>▪ Stand with solution bottle for safety.</li> <li>▪ Nebulizing rate: 4 ml/min or greater.</li> <li>▪ Mist particle size: Approx 1-5 microns.</li> <li>▪ Nebulizing time setting: 1-30 min&amp; continuous</li>   <li>▪ Medication cup capacity: 150 ml.</li> <li>▪ Accessories:</li> <li>▪ Tray set for nebulizer with tray track and pole mount fitting.</li> </ul> <p><b>UK/USA/JAPAN/ITALY Or equivalent</b></p>		
20	<p><b><u>ECG Machine from 06 channels or more</u></b></p> <ul style="list-style-type: none"> <li>- 06 channels or more than 06 channels ECG with compact and portable design,</li> <li>- 7 to 8" TFT Color LCD display with touch screen function,</li> <li>- One touch operation including gender and age group shortcuts,</li> <li>- Support bar code scanner to simplify workflow,</li> <li>- Weak signal detection with most advanced 24 bit A/D converter technology,</li> <li>- Anti noise technology with comprehensive filters and the high CMRR over 115dB,</li> <li>- 120s real time ECG waveforms freezing and review and assist diagnosis</li> <li>- Automatic measurement and interpretation tested with CSE/AHA/MIT database,</li> <li>- Extend printing once arrhythmia is detected to further your rhythm analysis,</li> <li>- Built-in rechargeable Li-ion battery, for more than 1.5 to 2 hours backup,</li> <li>- Built-in 200 or more ECG internal memory, LAN/WIFI/RS232 connection standard,</li> <li>- <i>Automatic measurement and interpretation test with authoritative CSE /AHA/MIT</i></li> <li>- Automatic analysis with gender and age specific, Pacemaker detection,</li> <li>-</li> <li>- Anti noise with comprehensive filters with high CMRR</li> </ul>	2	

  
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	<p>over 115dB,</p> <ul style="list-style-type: none"> <li>-</li> <li>- Heart rate variability analysis, Auto / manual work mode,</li> <li>-</li> <li>- Built in Printer with Three printing formats auto, manual ad rhythm selectable</li> <li>- External USB printer port for connecting Laser printer/low cost printing,</li> <li>- Unit should be offered with complete standard accessories and mobile trolley.</li> </ul> <p>Note: Unit should be latest and FDA, TUV, CE and MDD approved.</p> <p><b>UK/USA/JAPAN/EUROP Or equivalent</b></p>		
21	<p><b><u>Steamer</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>External Dimensions  Base Ø 55 cm - Arm 50 cm  Height 105-130 cm  Material  ABS  Electrical Specification  220-240 V 700 W 50/60 HZ  The <b>Viso</b> steamer is ideal for performing deepcleansing facial treatments. The unit takes advantage of the dilating effect of steam, which can also be supplemented with ozone.  The steam delivery nozzle on the arm can be positioned as desired, and the rolling stand allows the unit to be moved effortlessly.  Also equipped with a timer and a safety system that shuts off the unit if it runs out of water or if the thermostat fails.</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	4	
22	<p><b><u>Air Mattress</u></b></p> <p>Commodity Size 1940*840*80 MM , Packing Size 1940*900*80 MM, CBM 0.13  material: waterproof, mold proof, ventilate cover, sponge ,palm fiber</p>	5	



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	<b>UK/USA/JAPAN/EUROP or equivalent</b>		
23	<b><u>UV Lights</u></b> <ul style="list-style-type: none"> <li>- Latest Technology</li> <li>- Good quality</li> <li>- Standard Size</li> <li>- State of the art manufacturing</li> <li>- Brochure must be provided</li> <li>- Must be portable</li> <li>- As used world wide mostly in the field of Hospitals</li> </ul>	8	
24	<b><u>X-Ray Illuminator</u></b> <ul style="list-style-type: none"> <li>- Latest Technology</li> <li>- Good quality</li> <li>- Standard Size</li> <li>- State of the art manufacturing</li> <li>- Brochure must be provided</li> <li>- Must be 4 in 1 Horizontally</li> <li>- Must be Digital latest LED lights.</li> </ul>	4	
25	<b><u>Electrolyte Analyser</u></b> <b>Measuring Method:</b> ISE <b>Measuring Test:</b> Serum K <sup>+</sup> , Na <sup>+</sup> , Cl <sup>-</sup> , Ca <sup>++</sup> , pH <b>Measuring Units:</b> mmol/L K <sup>+</sup> : 0.50-15.00 0.01; CV≤1.0% Na <sup>+</sup> : 30.0-200.0 0.1; CV≤1.0% Cl <sup>-</sup> : 30.0-200.0 0.1; CV≤1.0% Ca <sup>++</sup> : 0.10-50.00 0.01; CV≤1.0% pH: 6.0-9.0 0.01; CV≤1.0% <b>Measuring Time:</b> Less than 30 sec <b>Sample Size:</b> 100μL <b>Communication Interface:</b> RS-232 <b>Display:</b> LCD <b>Printer:</b> Built in Thermal <b>Power Supply:</b> 220 -240 VAC 50/60Hz <b>Calibration:</b> Automatic or On Demand  <b>USA/UK/GERMANY/JAPAN Or equivalent</b>	1	

**2). List of furniture/ fixture for establishment of 24 Medical ICU  
at GMC Hospital Sukkur**



S#	Name of Item	Qty
1.	<p><b><u>Beds for Surgical ICU three folder</u></b></p> <p>Size: 2120*970*450*/700mm  Control by three cranks  Angle back Section: 0 – 80  Angle of nee section: 0 – 40  Adjustable height : 250mm  Integrated stamping frame and mattress base are steel made with epoxy bed head/foot board are made of ABS Plastic.  Standard Accessory: Two sectional I. v pole four 5 silence luxurious caster aluminum alloy collapsible type side rails.  (Imported Quality)  Strongman/Hilbro/Cutler or equivalent</p>	24
2.	<p><b><u>Foam Mattresses</u></b></p> <p>Size 6(L)* 4(W)* 6" (Thickness) superior quality equal to molty foam with warranty.  Master/Daimond or equivalent</p>	24
3.	<p><b><u>Blankets Red 60x90</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Woolen Made 6x6 Blankets Washable With Complete Stitching Side Coving.</p>	24
4.	<p><b><u>Chairs for Seminar Hall</u></b></p> <p>Frame made of sheesham talhi wood fancy design seat &amp; back cushioned.</p>	20
5.	<p><b><u>Tables for seminar hall Large Size</u></b></p> <p>Size 8(L)* 4(W)* 2½(H) made in oak veneer with dark walnut polish fancy design.</p>	02
6.	<p><b><u>Chair for offices</u></b></p> <p>Hi back revolving chair with gas lift and tilting back in p.p arm in stain resistant &amp; odour resistant polyolefin.  ( Equal to molty foam or Equaling)</p>	20
7.	<p><b><u>Books Rack for library</u></b></p> <p>Made by lamination 6(L)* 3(W)* 15" (D) with glass door edges bidding with talhi wood computer key looking system fancy design.</p>	04

8.	<b><u>Chairs for laboratory</u></b> Frame made of she sham talhi wood seat cushioned without arms superior quality.	08
9.	<b><u>Tables for laboratory ( Medium size)</u></b> Size 8(L)* 4(W)* 2½(H) made by lamination Wood edges bidding with talhi wood.	02
10.	<b><u>Office table</u></b> Executive Office Table 6X3X2.5 made in oak Veneer with dark walnut polish Side rack 48x18x30 Made oak veneer with dark walnut polish. 1 key side rack has one keyboard 3 no drawers 1 Cpu compartment Vertical file box Internal shelf All drawers are run on galvanized antirust double bearing slide. Handle are aluminium brushed.	05
11.	<b><u>Revolving chair</u></b> Hi back revolving chair with gas lift and titting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equalient)	05
12.	<b><u>Bed side lockers</u></b> Made of ABS plastic with side out dinner board & one drawer towel holder and sundry rack. (Imported Quality)	24
13.	<b><u>Iron Cupboards</u></b> Made by steel iron plate size 6(L)* 4(W)* 18" (D) with inter looking system gauge 22.	10
14.	<b><u>Nursing Counter</u></b> -STANDARD SIZE. -WOODEN COMPATIBLE WITH FURNITURE.	04
15.	<b><u>Stools steel</u></b> Frame made by steel seat & back fiber plastic with hydraulic system & adjustable imported quality. (lattest).	20
16.	<b><u>IV Stands steel</u></b> Metalic Base with steel stand adjustable (each stand should be posses four hangers and adjustable with beside bed)	48



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### 3- Other items

S#	Name of Item	Qty
1	<p><b><u>Air conditioners Split type 1.5 ton with stabilizers 10000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall and roof</li> <li>- Compatible branded stabilizer more than 12000 or equivalent.</li> </ul> <p>Dawlance/Haier/Orient or equivalent</p>	15
2	<p><b><u>Electric water cooler (with stabilizer) 5000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Capacity 35 Liters</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p>Fischer/Cannon or equivalent</p>	02
3	<p><b><u>Refrigerator (with stabilizer) 3000 watts</u></b></p> <ul style="list-style-type: none"> <li>- 15 cft</li> <li>- Two doors</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p>Dawlance/Orient/PEL or equivalent</p>	04
4	<p><b><u>Branded Desktop Computers with Monitor and latest laser Printer included and a camera latest &amp; with Servo Motor UPS (latest)</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Processors : Intel® Core™ i5-6500u, 4GB+1TB Hard drive 5x0 1333MHz (or higher) 4T/dual core/4M/73W/ LGA 1156</p> <p>Operating Systems :Genuine Windows® 7 Professional (64-bit) pre-installed (OEM media for OS and Drivers will be supplied by the vendor, (with licensed CD or back up CD)</p>	05

  
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	<p>Chipset : Intel® Q57 chipset  Form Factor • All-in-One  RPM SATA8  Memory • 4GB 1333 MHz DDR3 SoDIMM expandable  Up to 4GB memory  Optical Drive • DVD Recordable  Integrated Communications • Intel® 82578DM, 10M/100M/1000M Gigabit Ethernet  WiFi : Intel® Centrino® Wireless-N100 • Intel® Centrino® Ultimate-N6300  Bluetooth • QMI 9WBM102QCE01Q2 • Qcom QBT410UB-012  Ports:</p> <ul style="list-style-type: none"> <li>• (6) High speed USB 2.0 (2 side/4 rear)</li> <li>• (2) Side audio ports: headphone and microphone</li> <li>• (2) PS/2 ports</li> <li>• Serial2</li> <li>• Integrated display port</li> <li>• VGA-in</li> <li>• RJ-45</li> <li>• AC-in</li> </ul> <p>Slots • (1) Mini PCI-e x 1 slot • (1) Express card slot  Bays • (1) Internal HDD Bay 3.5 inch • (1) Internal ODD Bay 5.25 inch  Display/Monitor : LED 18.5" HP  Graphics Card: Intel® GMA HD (integrated)  Power Supply • 150 W 85 plus (auto-senser)  Latest Printer HP/DELL or equivalent standard</p>	
5	<p><b><u>Multi Media with screen (Latest)</u></b>  <b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Bright projection – 4200 ANSI lumens XGA resolution, 20,000:1 contrast ratio, HDMI input Crestron RoomView® – RJ45 control and monitoring</p> <p>Display Technology Single 0.55" XGA  DC3 DMD chip DLP® Technology by Texas Instruments Native Resolution XGA 1024 x 768 Brightness1 (Bright Mode) 4200 ANSI Lumens Contrast 20,000:1 Noise Level (Eco mode) 31dB Weight (kg) 2.57 I/O Connectors HDMI (1.4a 3D support), 2 x VGA (YPbPr/RGB), S-Video, Composite, 2 x Audio In 3.5mm, Audio Out 3.5mm, VGA Out, RS232, USB mouse/service, RJ45 Computer Compatibility UXGA, SXGA, XGA, SVGA, VGA, Mac Video Compatibility PAL (B, D, G, H, I, M, N, 4.43MHz),</p>	01



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	<p>NTSC (M, J, 3.58MHz, 4.443MHz),  SECAM (B, D, G, K, K1, L, 4.25,MHz,  4.4MHz, 480i/p, 576i/p, 720p(50/60Hz),  1080i(50/60Hz) 1080p(24/50/60Hz) Displayable Colours 1073.4  Million Projection Lens F/2.4~2.66; f=18.2~21.9mm,  1.2x Manual Zoom Throw Ratio 1.6 - 1.92:1 Projection Screen Size  0.78m- 7.79m (30.8" to 307") Diagonal 4:3 Projection Distance 1.2  - 12m Zoom Type 1.2x Manual Aspect Ratio 4:3 Native,  16:9 Compatible Offset 115% Horizontal Scan  Rate 15.3 - 91.1kHz Vertical Scan Rate 24 - 85Hz</p> <p>Lamp Type 260W Lamp Life2 Eco+/Dynamic/Eco/Bright  7000/5500/5000/3000 (hrs)</p> <p>Keystone Correction <math>\pm 40^\circ</math> Vertical Dimensions (W x D x H) (mm)  315 x 224 x 102 Power Supply 100-240V, 50-60Hz Power  Consumption 306W Bright mode / 257W Eco mode (&lt; 0.5W  Standby) Operating Conditions 5°C - 40°C,</p> <p>Max. Humidity 85%, Max. Altitude 3000m Uniformity 80%  Security Security bar, Kensington lock, password protection  Standard Accessories Carry bag, AC power cord, VGA cable,  remote control, battery, quick start card,</p> <p>CD user manual Optional Accessories DLP® Link™ 3D glasses,  wireless, ceiling mount RoHS Compliant 3D Support Full 3D - The  3D features of Optoma projectors can only be used with compatible  3D content. Typical applications include use with 3D educational or  3D design and modelling systems. 3D TV broadcast systems, (SKY  in the UK), Blu-ray 3D™ and 3D games from the Sony® PS3 or  Microsoft® Xbox 360 are now supported as part of the HDMI v1.4a  specification. 3D Compatibility Side-by-Side:1080i50 / 60, 720p50  / 60 Frame-pack: 1080p24, 720p50 / 60 Over-Under: 1080p24,  720p50 / 60 Speaker 10 On Screen Display 19 Languages: English,  German, French, Italian, Spanish, Portuguese, Polish, Dutch,  Russian, Finnish, Swedish, Greek,  Norwe<b>OPTIMA/SONY/PANASONIC or equivalent.</b></p>	
6	<p><b><u>Laptop (Latest Battery back up support for 2  hours or more including scanner with each  laptop preferable latest and high quality)</u></b></p> <p>- Processor Intel or Equivalent Core i7</p>	04

  
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(Medical Superintendent)  
GMMHC Hospital Sukkur

	<ul style="list-style-type: none"> <li>- 3.5 GHz preferable more</li> <li>- RAM at least 8 GB preferable more</li> <li>- Hard Disc at least 1 TB preferable more</li> <li>- DVD Rom with dual layer DVD (RW)</li> <li>- Ethernet from 100 to 1000 Mbps</li> <li>- DOS 2GB</li> <li>- LED 18" display</li> <li>- Video card / VRAM 256 MB preferable more</li> <li>Camera from 4 MP to 6 MP</li> </ul> <p><b><u>HP/Dell or equivalent</u></b></p>	
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Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**FINANCIAL OFFER**

S.No.	Equipment description	Qty	Unit Price		Total Price	
			C&F	DDP	C&F	DDP

The financial proposals should be submitted as above mentioned proforma according to quoted items accordingly.

\_\_\_\_\_

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_



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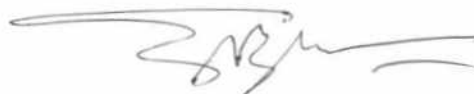
**ANNEXURE (B)**

**LIST OF MACHIENRY / EQUIPMENTS FOR ESTABLISHMENT OF 24  
BEDDED SURGICAL ICU AT GMC HOSPITAL SUKKUR**

<b><u>TECHNICAL OFFER</u></b>			<b>IMPORTANT</b> Please write YES / NO or deviation if any
S. NO:	Name of Items	Quantity	
1	<p><b><u>Ventilators</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- ICU Ventilator for Adults, Paeds and neonate.</li> <li>- Invasive and non-invasive techniques.</li> <li>- Screen size not less than 12" or more TFT colour Touch screen display with loops, graphs &amp; monitoring with internal compressor. Battery back up support for 2 hours or more.</li> <li>- Integrated Co2 Monitoring</li> <li>- Modes of ventilation: Assisted Control Mandatory Ventilation (CMV).</li> <li>- Synchronized Intermittent Mandatory Ventilation (SIMV).</li> <li>-</li> <li>- Spontaneous Ventilation.</li> <li>- Volume-controlled.</li> <li>- Pressure-controlled.</li> <li>- Volume Targeted Pressure. controlled</li> <li>- Apnea Backup Ventilation</li> <li>- Active Exhalation Valve</li> <li>- Automatic Leak Compensation</li> <li>- Tidal volume 20 - 2000 ml or better</li> <li>- Respiratory rate 0 - 150 bpm.</li> <li>- Pressure control : 20~60 cm H2O or better</li> <li>- Pressure support : 0~60 cm H2O or better</li> <li>- Peak flow 1-120lpm or better .</li> <li>- Inspiratory time: 0.1 ~ 8sec or better</li> </ul>	06	

  
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- Oxygen concentration: 21-100%
- ICU Vent is 10.4" LCD Color display with auto light sensor. (Auto, Dark, Medium, Bright) and clearly defined control buttons areas for Ventilation, Vital parameters and system control.
- ICU Station Ventilator with triple processor control
- ICU Station Vent provides the highest pneumatic driven ventilator performance & vital signs monitoring in one.
- Vent supports spontaneous breathing trials to access the ability of a patient to breathe unaided.  
CPAP/PSV,BILEVEL,M,SIMV(pressure controlled/volume controlled),PRVC(pressure Regulated Volume Control),A/C (VC/PC).Apnea backup ventilation-all signs of spontaneous breathing are always controlled and supported in any ventilation mode.
- The ICU Station which Monitors & Display Graphs and figures for such vital parameters as 3/5 lead ECG (ST Analysis, Arthymia, SPO2, 2x Temp, NIBP, and 2 x IBP.
- The device offers modern Invasive & non Invasive Ventilation with maximum comfort for adult & pediatric patients
- Ergonomic & slim space saving design allows various mounting options
- Automatic TC (Tube Compensation)Tracheal Tube Cuff pressure control regulation
- Built in intelligent pneumatic medication nebulizer system automatically activated during 75% of the aspiratory.
- Fast and precise oxygen measurement by laser absorption spectroscopy method.
- Exchangeable autoclave able aluminum plug in cassettes.
- All ventilation modes maintain assisted spontaneous breathing and show P.01 and intrinsic PEEP
- Possibility to choose between interval and continuous NIBP measurement
- Display parameter : Delivered oxygen concentration 21-100%
- Trend data up to 72 hours or more.,
- More than 40 parameter display.



	<ul style="list-style-type: none"> <li>- Real time graphic, volume vs time, flow vs time, pressure vs time, flow volume loop, pressure volume loop.</li> <li>- Comprehensive alarm for patient disconnection, low tidal volume, battery failure, breath rate, low pressure, etc.</li> <li>- Graphics Display</li> <li>- Apnea Back-up</li> <li>- Humidification Selection (HME, Humidifier, and None)</li> <li>- User Defined Custom Default Settings</li> <li>- Complete with humidifier, patient circuit disposable 50 nos./unit.</li> <li>- USA/UK/EEC or equivalent</li> </ul>		
2	<p><b><u>Monitors Multi-Para</u></b></p> <p><b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- Non fade colored touch LCD display monitor from 10" to 12" or more with minimum 4 trace capability or more preferable with excellent mobility.</li> <li>- Built-in ECG, NIB, Respiration, Temperature and Spo2 measurement etc. with all standard accessories including washable and reusable Spo2 probe.</li> <li>- Adult, Neonatal &amp; pediatric modes of operation, detection and alarms for all parameters</li> <li>- Waveform display 7 to 10 or more.</li> <li>- 12 lead ECG analysis and display.</li> <li>- Wave form trace speed : 25 and 50mm/sec</li> <li>- Color TFT touch screen display.</li> <li>- Size/ Dimensions: 13" x 15" Or better.</li> <li>- Manual/Automatic/Continuous measurement of NIBP</li> <li>- SpO2</li> <li>- 3/5/ 12-lead ECG waveform synchronously displays high precision ECG measurement technology, assisting in precise diagnosis of patients.</li> <li>- Intelligent alarm management allows auto identification of alarm level and self-adjusts proper alarm time to reduce false alarms.</li> <li>- Network capability</li> <li>- USB interface available.</li> <li>- Monitor should have rechargeable battery allows for over 4 hours of continuous working time or better</li> <li>- Monitor should be quoted with 2 X IBP , Cardiac Output And ETCO2 (optional)</li> </ul> <p><u>ECG</u></p> <ul style="list-style-type: none"> <li>-</li> <li>- Algorithm optimized for arhythmia detection.</li> </ul>	25	



- 12 lead diagnostic algorithm with 200 kind of analysis results.
- Leads selection: I, II, III, aVR, aVF, aVL, V, V1-V6, TEST
- Selectable neonatal & pediatric operation
- Ability to detect neonatal & pediatric heart rate range, qrs widths and amplitudes.
- Numeric heart rate
- Real time wave form
- Variable gain: 0.5,1,2&4
- Heart beat indication

#### NIBP

- Algorithm optimized for cardiac patients, hypertensive patients and neonatal patients. Algorithm with intelligent Co2 pseudo wave identification technology with VGA/ DVI output should be as standard in unit.
- 1200 sets of NIBP measurement and 60 alarm events
- Pressure ,oscillometric principal.
- Systolic , diastolic and mean pressure
- Rising cuff/continuous pressure display

#### Temperature:

- Numeric temperature selectable in centigrade or Fahrenheit scale.
- Temperature with probe (external and rectal)
- Ability to measure neonate and pediatric temperature range


#### Pulse Oximeter

- Number oxygen saturation measurement
- Range: 0-100%
- Motion Tolerance Technology
- Sensor for neonate/infant and pediatrics
- Respiration impedance method using ECG leads for sensing.
- Breathing rate range, sweep speed
- Selectable apnea alarm
- Built-in battery with charger for at least 2 hours or more
- The system must be complete with all sensors, probes and cables and accessories required for measuring all above selected parameters for adults/paeds and neonatal.
- Following parameter should be quoted as optional:  
2 -IBP, EtCo2 and cardiac output.

#### Respiration:

- Breathe rate display and alarms
- Sweep speed, 12.5 to 50 mm/sec.

	<ul style="list-style-type: none"> <li>- Trend data 72 hours trend graphical and tabular</li> <li>- Alarm High &amp; Low settable on all parameters</li> <li>- Visual and audible indication of alarms</li> <li>- Apnea time 5-40s</li> <li>- Ac 220 volt /50Hz operating requirement</li> </ul> <p>USA/UK/EEC/Japan or Equivalent</p>		
3	<p><b><u>Defibrillator:</u></b></p> <p><u>Specification:</u></p> <ul style="list-style-type: none"> <li>- Biphasic transthoracic (external) defibrillator with display of 5.5" screen or more.</li> <li>- Synchronized output with ECG</li> <li>- Control of energy charges / delivering on main panel and apex paddle.</li> <li>- Charging indicators</li> <li>- The energy range should be adjustable for peds and adults up to 200J or more.</li> <li>- Charging time for full energy should be less than 7 sec.</li> <li>- Display of heart rate, ECG through paddles and lead I,II&amp; III patient cables.</li> <li>- 360 J energy, Biphasic Waveform Technology</li> <li>- 7" color graphic TFT LCD display or better.</li> <li>- Built-in standard 12-lead ECG</li> <li>- Synchronous or asynchronous mode</li> <li>- Semi-automatic (AED) or manual control</li> <li>- Operation from paddles</li> <li>- Short charging time less than 5 sec or better</li> <li>- Charging time for fast action start from 2.7 secs to 200 J , 4.5 secs to 360 J</li> <li>- Alarm functions</li> <li>- Should have 3-channel high-resolution recorder or better.</li> <li>- Should have <b>Pacemaker with</b> Mode Demand (VVI), Fixed Rate (VVO), Type Transthoracic non-invasive, Waveform Rectilinear, constant current</li> <li>- Pulse Width 40 msec, Current Amplitude 0 and 20..200 mA, 1 mA resolution</li> <li>- Rate 30..200 ppm, 1 ppm resolution</li> <li>- Patient Impedance Range 0..1000 ohms with indicator</li> <li>- Should have Optional upgradeable for ETCO2 , SpO2, NIBP</li> <li>- Should have available option any time upgradeable for</li> </ul>	2	

  
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	<p>electrodes for internal defibrillation.</p> <ul style="list-style-type: none"> <li>- Battery Capacity More than 5 hours continuous monitoring or 200 shocks at 200J Indicator 5-stage indicator on screen and LED indicator when turned off, Must be Charge time Less than 2 hours for full charge.</li> <li>- Report Browser Software On PC, from exported USB data.</li> <li>- . Built-in recorder for printing of full summery of standard 50mm paper.</li> <li>- Alarm for high and low heart rate, low battery warring.</li> <li>- Built in rechargeable battery with charges for more than 100 shocks</li> <li>- Auto test/self-check</li> <li>- External pediatric and adult paddles.</li> <li>- ECG cable</li> <li>- AED facility with cable.</li> <li>- AC 220V/50Hz operated</li> </ul> <p>Accessories:</p> <ul style="list-style-type: none"> <li>- Supplied with drfibrillator</li> <li>- Battery with 4 years shelf life</li> <li>- External paddle adult &amp; child</li> <li>- EC Cable – 3 leads</li> <li>- Ultrasound gel</li> <li>- Electrodes pack</li> <li>- AED Pads- Adult /pediatric</li> <li>- USA/UK/EEC/Japan or Equivalent</li> </ul>		
4	<p><b><u>Infusion Pumps</u></b></p> <p><b>Specification:</b></p> <ul style="list-style-type: none"> <li>- Microprocessor controlled with back LIT graphic &amp; coloured LCD display.</li> <li>- Audible and visible alarms for occlusion (upper &amp; lower), complete, low battery, door open, amalfunction, bubble.</li> <li>- Infused volume &amp; volume max: limit range 1- 999.9ml</li> <li>- Volumetric peristaltic infusion pump.</li> <li>- Flow rate 0.1 to 99.9 ml/h.</li> <li>- Unit compatible with most IV set.</li> <li>- Memory function in case of power failure to retain the most recent flow rate &amp; total volume.</li> </ul> <p><b>Rate</b> 0.1 - 999.9 ml/h in 0.1 ml/h step</p> <p><b>Selection infusion volume</b> 0.1 - 9999 ml in 0.1 ml step up 0.2 to 999.9 ml, 1 ml steps above</p>	4	

<b>Infusion time selection</b>	1 min - 99 h 59 min in 1 min step	
<b>Program rate &amp; volume</b>	ml/h & ml	
<b>Program volume &amp; time</b>	ml & h.min (pump calculates flow rate)	
<b>Bolus rate</b>	0.1 - 1200 ml/h programmable without flow interruption	
<b>Bolus volume</b>	0.1 - 999 ml programmable with flow interruption (automatic & manual)	
<b>Purge rate</b>	1 - 1200 ml/h	
<b>Accuracy</b>	± 5% (set dependent / depend de la tubulure)	
<b>Air bubble detector</b>	50 - 1000 µl (configurable)	
<b>Air bubble accumulation</b>	100 - 2000 µl (50 µl steps) within 8 - 64 min (8 min. steps), configurable	
<b>Drop detector</b>	10 - 65 drops/ml (configurable)	
<b>KVO (Keep Vein Open rate)</b>	0.1 - 3 ml/h	
<b>Pump calibration</b>	yes / oui / ja (software guided)	
<b>Occlusion pressure limit</b>	100 - 1000 mbar (10 steps programmable without flow interruption)	
<b>Occlusion pressure reduction</b>	yes / oui	
<b>History</b>	> 200 Events	
<b>Drug library</b>	> 50 médicaments / drugs	
<b>Staff alerting system</b>	24 V / 0.2 A (static or dynamic potential free relay contact)	
<b>RS-232 interface galvanic isolated</b>	yes / oui	
<b>Mains power supply</b>	230 VAC ±10%, 50/60 Hz ,	
<b>Protection class</b>	opt. 115 V 60 Hz, 12 VA , or 20 VDC / 0.3A, II	
<b>Applied part</b>	Type CF	
<b>MDD classification</b>	IIb	
<b>Battery</b>	NiMH (maintenance free / sans entretien)	
<b>Battery operation</b>	Typ. 5 h @ 25 ml/h	
<b>Battery charge time</b>	15 h	

  
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	<p><b>Dimensions</b>  <b>Housing</b>  <b>Operating temperature</b>  <b>Relative humidity</b>  <b>Protection</b>  <b>Weight with battery</b>    <b>Approvals</b></p> <ul style="list-style-type: none"> <li>- Comprehensive alarm for Air in line, occlusion, door open, low battery, infusion complete, empty container.</li> <li>- Built in battery with battery charger.</li> <li>- Unit complete with 10 nos. IV sets.</li> <li>- Moisture protection IP 22, drip protected for horizontal usage</li> <li>- Buzzer level of 3 steps history call back upto 10 data.</li> <li>- Lifetime minimum 10 years under continuous duty conditions.</li> <li>- USA/UK/EEC/Japan or Equivalent</li> </ul>	<p>190x160x130 mm (W x H x D) excl. clamp  ASA (high performance plastic)  5° - 40° C  20 - 90% no condensation /  sans condensation  IPX2  2.0 kg    CE0120, EN 60601-  (1, 1-2, 1-4, 2-24), EN 61000-3-  (2, 3)</p>	<p>excl. clamp</p>	
<p>5</p>	<p><b><u>AB G Machine</u></b>  <b><u>Specification:</u></b></p> <ul style="list-style-type: none"> <li>- • Measured parameters: pH, pCO<sub>2</sub>, pO<sub>2</sub>, Hb</li> <li>- • Specimen: whole blood, serum, plasma, Dialysate</li> <li>- • Analysis time: 50 seconds</li> <li>- • Display: Minimum 12 inch color display / touch panel</li> <li>- • Entered parameters: Patient I.D, Sex, Age</li> <li>- • Calibration: Automatic, programmable 1 &amp; 2 point calibration</li> <li>- • Data storage: 10,000 samples OR more</li> <li>- • Printer: Built-in Printer</li> <li>- • Barcode: Built-in (Readability more than 10 kinds of barcode)</li> <li>- • Built-in battery backup.</li> <li>- • Interface: TCP/IP</li> <li>- • Maintenance free electrodes</li> <li>- • Operating temperature: 10-30 C</li> </ul>		<p>2</p>	

  
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UK/USA/JAPAN/EUROP or equivalent

64

Double Oxygen line & Double Air Line system

Central

**CENTRAL MEDICAL GASES SYSTEM**

Supplying / Installation of complete  
Medical Engineering System Comprising  
of: -

**COPPER PIPE**

- Imported Copper Pipe 18 Swg.  
de – Oxidised, de – greased, half – hard,  
solid drawn with required copper fittings  
as follows: -

Size	1"	-	Rft.
	3/4"	-	Rft.
	1/2"	-	Rft.

- **OUTLET POINTS**

Medical Gases Outlet Points,  
Surface Type, wall – mounted  
In accordance with the Healthcare  
Technical Memorandum  
HTM 2022

- Oxygen Outlet
- Air Outlet – 4 bar
- Nitrous Oxide
- Vacuum Outlet Points
- Air Outlet 7 bar

**(U.K/U.S.A/JAPAN)**

- **ISOLATION VALVES**

Isolation Valves with adaptor.

Size	3/8"
	1/2"
	3/4"
	1"

**(U.K/U.S.A/JAPAN)**

- **MEDICAL AIR PLANT SYSTEM**

Oil Free Air Compressor System

Comprising of: -

- I) 02 Nos. Air Compressor Sysetm  
**15 HP** (One in use and other stand by)
- II) 02 Nos. Refrigerated Air Dryers
- III) 02 Nos. Pre- Air Filter (5 Micron)
- IV) 02 Nos. After Air Filter (1 Micron)

**(U.K/U.S.A/TAIWAN/KOREA/JAPAN)**

- BY PASS SYSTEM**  
 By pass system with Network of pipeline system and Isolation Valves to connect the stand By Compressor and refrigeration dryer In case of emergency. (LOCAL)
- CONTROL PANEL**  
 Change over electric control panel Complete with installation for Compressor and Dryer. (LOCAL)
- OXYGEN SUPPLY MANIFOLD**  
 The Manifold is a to switch from bank in use to reserve Bank without fluctuation in delivery supply line pressure and without the need for external power. After the switch-over the "reserve" bank becomes the "bank in use" and the bank in use becomes the reserve bank. The system is able maintain continuous supply 1500LPM Capacity (2 x 10) with capacity of 180 M3/H set of conection for cylinders/Hp. Valves , discharging valves, tell pipe  
**Make: Local with Imported parts**
- NITROUS OXIDE MANIFOLD (LOCAL)**  
 The Manifold is a to switch from bank in use to reserve Bank without fluctuation in delivery supply line pressure and without the need for external power. After the switch-over the "reserve" bank becomes the "bank in use" and the bank in use becomes the reserve bank. The system is able maintain continuous supply 1500LPM Capacity (2 x 4) with capacity of 50 M3/H set of conection for cylinders/Hp. Valves , discharging valves, tell pipe  
**Make: Local with Imported parts**
- ZONE SERVICE UNITS (LOCAL)**  
 Zone Service Unit complete box With Imported Isolation Valve and adaptor.
- MEDICAL GAS ALARM**  
 Supplying and installation of Alarm



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	<p>System of different Gases  With mute / test facility, gives  Sound and flash light whenever  The pressure in line decreases  The set pressure for individual  Gas i.e  - Oxygen -  - Medical Air 4 bar -  (LOCAL)</p> <ul style="list-style-type: none"> <li>• <b>FLOWMETER SET</b>  Oxygen Flowmeter 0 – 15 LPM  Complete with Humidifier and probe  (U.K/U.S.A/JAPAN)</li> <li>• <b>SUCTION INJECTOR UNIT</b>  Complete with 02 Ltrs (2000ml)  Collection jar and probe  (U.K/U.S.A/JAPAN)</li> </ul>		
7	<p><b><u>Double vacuum system</u></b>  (Compatible to central oxygen system)  -THE SYSTEM SHOULD BE JOINT WITH SURGICAL ICU.</p>	Central	
8	<p><b><u>Crash trolley</u></b>  <b><u>CRASH CART TROLLEY :</u></b>  Dimensions are 26.5"W x 32"D x 44.25"H.</p> <p><b><u>CART INFORMATION:</u></b></p> <ul style="list-style-type: none"> <li>• Solid molded top/handle (WORK SURFACE IS A TOTAL OF 19.50" W x 21"D)</li> <li>• Sliding work surface (ADDITIONAL WORK SURFACE IS A TOTAL OF 11.25")</li> <li>• Full extension see-thru drawer trays</li> <li>• Removable and transportable trays</li> <li>• Ball bearing slides</li> <li>• Adjustable door storage</li> <li>• Instant access-one touch breakaway seal</li> <li>• Stabilizer frame bumper</li> <li>• 5" casters (1 brake, 1 tracking, 2 swivel)</li> </ul> <p><b><u>ACCESSORIES INCLUDED:</u></b></p> <p>ABH-2                      Ambu bag hooks  01  CBB-ER                      Cardiac board and bracket</p>	4	

  
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GMMHC Hospital Sukkur

	01 PS-100 Breakaway seals 01 IV-3 IV pole 01 O-2 Oxygen tank bracket 01 ER-LBL Airway, breathing, circulation labels 01		
9	<b><u>Laryngo scope</u></b> <b>Order No. Description</b> UltraSafe™ Standard UltraSafe™ Mini UltraSafe™ Paediatric UltraSafe™ Stubby <b>Batteries</b> C AA N AA <b>Order No.</b> 5525 5526 5527 5523 Distributed by: <b>Stainless Steel Reusable Blade</b>		03 Sets
10	<b><u>Ambo Bag</u></b> <b><u>TECHNICAL SPECIFICATION:</u></b> Bag volume: Adult (1475 ml), Pediatric (635 ml), Neonate (220 ml) Dimensions: Adult (295x127 mm), Pediatric (234x99 mm), Neonate (165x70 mm) Weight: Adult (350 g), Pediatric (230 g), Neonate (112 g) (including reservoir and mask)  Additional detailed specification can be found in the datasheets.  <b>UK/USA/JAPAN/TAIWAN or equivalent</b>		10
11	<b><u>B.P Apparatus</u></b> The maximum number of cuff inflations for each SP in the mercury measurement is <b>five</b> , counting all MIL attempts and blood pressure attempts. The rationale for this is twofold: to minimize the discomfort to the SP of		10

  
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**GMMMC Hospital Sukkur**

	<p>frequent cuff inflations and to accomplish data collection for this measurement within the time allowed.</p> <p>Wall mounting With self assessment digital print out</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>		
12	<p><b><u>BIPEP Ventilators</u></b></p> <p><b><u>Specification:</u></b></p> <p>Meeting the demands of fast-paced hospitals premium non-invasive ventilator series (with invasive capabilities) for patients with changing ventilatory needs or progressive respiratory conditions, including chronic obstructive pulmonary disease (COPD), neuromuscular disease (NMD) and obesity hypoventilation syndrome (OHS). It is packed with technologies to deliver a versatile ventilation solution, but not at the expense of easy setup and use. Taking into consideration the busy hospital environment and typical workflows, Its intuitive menus simplify the setup process, while its real-time data display makes monitoring quick and always available. Providing the modes you'd expect to see for excellent positive pressure ventilation, it also includes the auto-adjusting, volume-assured mode, iVAPS, with an intelligent Backup Rate, and optional AutoEPAP feature – delivering what we call IntelligentAir.*</p> <p>IntelligentAir continuously monitors and automatically adjusts to deliver personalised therapy to patients with changing ventilatory needs.</p> <ul style="list-style-type: none"> <li>▪ <b>Integrated oxygen:</b> up to 30 L/min</li> <li>▪ <b>High pressure delivery:</b> up to 40 cm H2O at the mask</li> <li>▪ <b>Extensive alarms:</b> including FiO2 and SpO2 to provide added assurance for 'at risk' patients</li> <li>▪ <b>Paediatric use:</b> for children weighing down to as little as 13 kg</li> <li>▪ <b>Pass-over or CounterStream™ humidification:</b> heated humidification with the H4i™ or HumiCare™ D900</li> <li>▪ <b>Dual programs:</b> set and save up to two programs per patient for day/night ventilation or rest/active periods</li> <li>▪ <b>Personalised efficacy and comfort:</b> using the following features, you can easily fine-tune settings on a patient-to-patient</li> <li>▪ <b>intelligent Volume-Assured Pressure Support (iVAPS):</b> Targets each patient's alveolar ventilation</li> <li>▪ <b>intelligent Backup Rate (iBR):</b> Provides backup breaths only when needed to give patients a chance to spontaneously trigger the ventilator</li> </ul>	4	



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(Medical Superintendent)  
GMMMC Hospital Sukkur

	<p>▪ <b>AutoEPAP:</b> Auto-adjusts the expiratory pressure in response to partial and full upper airway obstructions.</p> <p>Modes: iVAPS (intelligent volume assured pressure support with</p> <p>ST (Spontaneous-Timed)  PAC (Pressure Assisted Control)  CPAP (Continuous Positive Airway Pressure)  S (Spontaneous)  T (Timed)</p>		
Pressure range or output	IPAP: 2 or 3–25 to 40 cm H <sub>2</sub> O (+/- 0.5 cm H <sub>2</sub> O) EPAP: 2 or 3–25 cm H <sub>2</sub> O		
TiControl™	(+/- 0.5 cm H <sub>2</sub> O) Ti Max 0.3–4 sec Ti Min 0.1–Ti Max		
Respiratory Rate	5–60 bpm		
Rise Time	Min, 150–900 msec (approx.)		
Trigger and Cycle	Five sensitivity settings		
Adjustable alarms	High Leak Low Minute Ventilation Low and High Pressure Low and High Respiratory Rate Apnoea Low and High FiO <sub>2</sub> Low SpO <sub>2</sub> Non-vented mask		
Standard fixed alarms	Circuit disconnected Over pressure Blocked tube Internal battery empty		
Dimensions (LxWxH)	230 x 170 x 120 mm		
Weight	2.1 kg		
Air filter	Electrostatic fibre mesh		
Air outlet	22 mm taper, compatible with ISO5356		
Internal battery	Lithium-ion, 2 hours at EPAP 5, IPAP 1		
Power supply	AC 100–240V 50–60Hz, 2.2A AC 110V 400Hz, 2.2A DC 24V/3A		
IEC 60601–1 Classification	Class II (double insulation) Type BF Co operation		
<b>COMPONENTS:</b> Main unit			



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GMMMC Hospital Sukkur



	<ul style="list-style-type: none"> <li>· Tube</li> <li>· Full face Mask</li> <li>· Operation Manual</li> <li>· Power cord</li> <li>· Carrying Bag</li> </ul> <p>Functionalities</p> <ul style="list-style-type: none"> <li>- Front-facing screen</li> <li>- Auto reminder settings</li> <li>- Large, backlit buttons</li> <li>- Multilingual menu</li> <li>- Can run on external battery (by-pass Humidification option)</li> <li>- Downloading compliance data Dream star card or mini USB cable</li> <li>- Auto ON Function</li> </ul> <p>Accessories:</p> <ul style="list-style-type: none"> <li>- Main unit</li> <li>- Humidifier Reservoir</li> <li>- Power cable</li> <li>- Memory card</li> <li>- Carrying case</li> <li>- Operating manual</li> <li>- Air intake filter (spare)</li> <li>- Mask</li> <li>- High efficiency filter</li> <li>- Data management</li> <li>- Patient tubing 1.8 meter</li> </ul> <p><b>Country of Origin: USA/Australia/JAPAN or Equivalent</b></p>		
13	<p><b><u>Blood warmer</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <ul style="list-style-type: none"> <li>• Dry heat warming system</li> <li>• Efficient warming from 0 to 600 ml/min</li> <li>• Automatic and without adjustment</li> <li>• Fixed temperature instruction: 41°C</li> <li>• Exit temperature display</li> <li>• LCD display screen</li> <li>• Exit temperature level alarm</li> <li>• Well positioning bag detector</li> <li>• Monitoring of regulation probes</li> <li>• Monitoring of heating plate temperature</li> </ul> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	5	
14	<p><b><u>Nebulizer Machine</u></b></p>	12	



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(Medical Superintendent)  
GMM Hospital Sukkur

	<p><b><u>TECHNICAL SPECIFICATION:</u></b>          Ultrasonic energy for uniform and highly dense 1-5 microns.          ▪ More than 96% of 0.3 micron or larger air borne dust particles is effectively shut out with the air filter to provide purified air for aerosol nebulization. Medication cup with replaceable diaphragm.          ▪ Easily detachable fan cover and pneumoclean (Air filter).          ▪ Made of highly resistant sterilizable resin.          ▪ Stand with solution bottle for safety.          ▪ Nebulizing rate: 4 ml/min or greater.          ▪ Mist particle size: Approx 1-5 microns.          ▪ Nebulizing time setting: 1-30 min &amp; continuous          ▪ Medication cup capacity: 150 ml.          ▪ Accessories:          ▪ Tray set for nebulizer with tray track and pole mount fitting.</p> <p><b>UK/USA/JAPAN/ITALY Or equivalent</b></p>		
15	<p><b><u>ECG Central Monitor</u></b></p> <p><b>Central Station Software :</b>          Should have parameters: ECG, HR,ST segments, RESP, NIBP, SPO2, PR, TEMP, IBP, EtCO2, AG, ICG, CO, etc          Maximum 17 waveforms on single display, supporting key bed monitoring, OxyCRG, arrhythmia analysis and review.          Long distance bidirectional control: patient information start /stop NIBP measurement, auto NIBP measurement period, ECG lead , gain, filter mode, alarm range and level.          With alarm classification statics and print out          Capable of monitoring 16 patients, expandable to 32, 64 and 128 patients monitoring system with one Central Monitoring Station.</p> <p><b>Should have storage:</b> 72 hour full disclosure waveform review, 1000 alarm records review, 50,000 patient historical data. All the information can be stored in disk or better</p> <p>Should have <b>Trend Time:</b> Maximum 2,400 hours trend graph review or better</p> <p><b>Should have Alarms functions:</b> Intelligent 3-level audio/visual alarm.</p> <p><b>Should have standard network interface:</b> TCP/IP central monitoring system, be able to observe full vital signs information of the patient.</p> <p><b>System should have Bi-directional Communication:</b> bi-</p>	02	



	<p>directional communication function to realize the mutual control of central monitor and bedside monitors.</p> <p><b>Should have Data File Review:</b> Large storage capacity of full monitoring information for easy review, analysis and statics.</p> <p><b>Should have flexible connection methods:</b> LAN, wireless LAN and mixture networking are available for meeting different clinical requirements.</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>		
16	<p><b><u>Steamer</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>External Dimensions  Base Ø 55 cm - Arm 50 cm  Height 105-130 cm  Material  ABS  Electrical Specification  220-240 V 700 W 50/60 HZ  The <b>Viso</b> steamer is ideal for performing deepcleansing facial treatments. The unit takes advantage of the dilating effect of steam, which can also be supplemented with ozone.  The steam delivery nozzle on the arm can be positioned as desired, and the rolling stand allows the unit to be moved effortlessly.  Also equipped with a timer and a safety system that shuts off the unit if it runs out of water or if the thermostat fails.</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	02	
17	<p><b><u>Air Mattress</u></b></p> <p>Commodity Size 1940*840*80 MM , Packing Size 1940*900*80 MM, CBM 0.13  material: waterproof, mold proof, ventilate cover, sponge ,palm fiber</p> <p><b>UK/USA/JAPAN/EUROP or equivalent</b></p>	05	
18	<p><b><u>UV Lights</u></b></p> <ul style="list-style-type: none"> <li>- Latest Technology</li> <li>- Good quality</li> <li>- Standard Size</li> <li>- State of the art manufacturing</li> </ul>	04	



	<ul style="list-style-type: none"> <li>- Brochure must be provided</li> <li>- Must be portable</li> <li>- As used world wide mostly in the field of Hospitals</li> </ul>		
19	<p><b><u>X-Ray Illuminator</u></b></p> <ul style="list-style-type: none"> <li>- Latest Technology</li> <li>- Good quality</li> <li>- Standard Size</li> <li>- State of the art manufacturing</li> <li>- Brochure must be provided</li> <li>- Must be 4 in 1 Horizontally</li> <li>- Must be Digital latest LED lights.</li> </ul>	4	
20	<p><b>Ambulatory (Holter) HR ECG With Blood Pressure Monitoring System: Complete With Computer, Software and Holter Devices</b></p> <p><b><u>Specifications/ Feature:</u></b></p> <ul style="list-style-type: none"> <li>• Fast record analysis</li> <li>• Should have FDA 510K certificate</li> <li>• Simple, user friendly software with multiple functions</li> <li>• Precise QRS classification and rhythm analysis</li> <li>• QRS template classification</li> <li>• Arrhythmia analysis, arrhythmia overview</li> <li>• Color coded graphs</li> <li>• ST level and slope analysis</li> <li>• QT analysis</li> <li>• Heart Rate Variability analysis (Time and frequency domain)</li> <li>• Heart Rate Turbulence analysis</li> <li>• Atrial Fibrillation analysis</li> <li>• Microvolt T</li> <li>• Pacemaker analysis</li> <li>• BP record analysis using multiple computed parameters and graphs</li> <li>• Various Holter reports</li> <li>• GDT</li> <li>• Local, network operation</li> <li>• Export, import functions</li> <li>• Full-disclosure ambulatory ECG records</li> <li>• 2 independent channels</li> <li>• Compact size, lightweight, graphic LCD display</li> <li>• Wireless (Bluetooth) communication with PC</li> <li>• Patient event</li> <li>• Recording duration: 24, 48, 72 hours</li> <li>• PC connection: Bluetooth, USB</li> <li>• Sampling rate: 128, 256, 512, 1024 Hz</li> </ul>	02	



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	<ul style="list-style-type: none"> <li>• Recording rate: 128, 256, 512, 1024 Hz</li> <li>• ADC resolution: 16 bit</li> <li>• Dynamic range: +/- 20 mV</li> <li>• Power supply: 1 X 1.2 V AAA</li> <li>•</li> </ul> <p><b><u>Country of Origin:</u> UK, USA, Europe and Japan</b></p>		
21	<p><b><u>Suction Machine</u></b></p> <p>Electric High Suction Machine</p> <p>Low Noise, Twin Jar</p> <p>Complete with two autoclavable jars</p> <p>Of 02 Litres each.</p> <p>Vacuum – 0 to 650 mmHg</p> <p>Flowrate – 30 L/Min</p> <p><b>USA/UK/GERMANY/JAPAN Or equivalent</b></p>	5	
22	<p><b><u>Autoclave Bench top</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <ol style="list-style-type: none"> <li>1. Stand-alone bench top autoclave 20 Litres, automatic .Single door, self sealing with high-quality silicone gasket</li> <li>2. Chamber diameter ca 25 cm, depth ca 45 cm. The autoclave should have double wall sheet metal with suitable insulation in between walls.</li> <li>3. Pre-set automatic cycles for unwrapped instruments, wrapped instruments/packs;</li> <li>4. Slow exhaust and drying cycles</li> <li>5. Two automatic programmes, approx: 2,2 bar at 134 degree C and 1,1 bar at 121 degree C. The equipment should have automatic pressure control switch / automatic water control device to ensure that the equipment does not run dry.</li> <li>6. Panel reports temperature, pressure and time, low-water level, as well as system errors (f.e. door). Temperature display should be digital and pressure display should be analogue.</li> <li>7. Fit with 5 L water reservoir, manual fill, autonomy for at least 10 cycles</li> <li>8. Power shut-off upon completion of cycle</li> <li>9. With 3 removable shelves</li> <li>10. Double safety door locking device</li> <li>11. Safety feature</li> </ol>	1	



	<p>protect against over-pressure and over-temperature 12. Audible and visual alert upon cycle interruption or completion</p> <p><b>USA/UK/GERMANY/JAPAN Or equivalent</b></p>		
23	<p><b><u>Portable ECG Machine 6 Channels</u></b></p> <ul style="list-style-type: none"> <li>- 06 channels or more than 06 channels ECG with compact and portable design,</li> <li>- 7 to 8" TFT Color LCD display with touch screen function,</li> <li>- One touch operation including gender and age group shortcuts,</li> <li>- Support bar code scanner to simplify workflow,</li> <li>- Weak signal detection with most advanced 24 bit A/D converter technology,</li> <li>- Anti noise technology with comprehensive filters and the high CMRR over 115dB,</li> <li>- 120s real time ECG waveforms freezing and review and assist diagnosis</li> <li>- Automatic measurement and interpretation tested with CSE/AHA/MIT database,</li> <li>- Extend printing once arrhythmia is detected to further your rhythm analysis,</li> <li>- Built-in rechargeable Li-ion battery, for more than 1.5 to 2 hours backup,</li> <li>- Built-in 200 or more ECG internal memory, LAN/WIFI/RS232 connection standard,</li> <li>- <b><i>Automatic measurement and interpretation test with authoritative CSE /AHA/MIT</i></b></li> <li>- Automatic analysis with gender and age specific, Pacemaker detection,</li> <li>- Anti noise with comprehensive filters with high CMRR over 115dB,</li> <li>- Heart rate variability analysis, Auto / manual work mode,</li> <li>- Built in Printer with Three printing formats auto, manual ad rhythm selectable</li> <li>- External USB printer port for connecting Laser printer/low cost printing,</li> <li>- Unit should be offered with complete standard accessories and mobile trolley.</li> </ul> <p>Note: Unit should be latest and FDA, TUV, CE and MDD approved.</p>	1	



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	<b>USA/UK/GERMANY/JAPAN Or equivalent</b>		
24	<p><b><u>Blankets Warmer</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Woolen Made 6x6 Blankets Washable With Complete Stitching Side Coving.</p>	1	
25	<p><b><u>Pulse Oximeter</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <ul style="list-style-type: none"> <li>- Built-in memory and data export to PC</li> <li>- Light weight, easy to use</li> <li>- Built-in rechargeable battery works 10 hours Desktop charging station and stand</li> <li>- Low perfusion, anti movement technology</li> </ul> <p><b>Standard Accessories:</b></p> <ul style="list-style-type: none"> <li>- SpO2 finger sensor, adult.. 01each</li> <li>- SpO2 sensor, Peads/Neonates.. 01each</li> <li>- Charging station with power cord.. 01each</li> <li>- Comm cable for PC data transfer.. 01each</li> <li>- Manual.. 01each</li> </ul> <p><b>USA/UK/GERMANY/JAPAN Or equivalent</b></p>	25	
26	<p><b><u>Oesophagal stethoscopes</u></b></p> <p><b><u>TECHNICAL SPECIFICATION :</u></b></p> <p><b>Length:</b> 27" (69 cm)  <b>Weight:</b> .4079 lbs (185 g)  <b>Binaural Construction:</b> Single lumen  <b>Chestpiece Finish:</b> Chrome  <b>Chestpiece Technology:</b> Single sided  <b>Diaphragm Diameter:</b> 2.0" (51 cm)  <b>Diaphragm Material:</b> Polyurethane-Coated Silicone  <b>Diaphragm Type:</b> Digital Electronic Filtering - Ambient Noise Reduction (ANR)  <b>Eartip Type:</b> Soft Sealing  <b>Extra Eartips:</b> No  <b>Headset Material:</b> Wide diameter aerospace alloy / Anodized aluminum  <b>Patient:</b> Adult, Infant, Pediatric  <b>Performance:</b> 10+</p>	10	



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	<b>Special Adaptors:</b> No <b>Tube Color:</b> Black <b>Model:</b> 3MTM Littmann® Electronic Stethoscope Electronic 3200 <b>Applications:</b> Cardiology/High Performance		
27	<b><u>Mini Tracheostomy set</u></b>  <b><u>TECHNICAL SPECIFICATION:</u></b>  30pcs Instruments Set With Instrument Tray	2	

**2). List of furniture/ fixture for establishment of 24 Surgical ICU at GMC Hospital Sukkur**

S#	Name of Item	Qty
1.	<b><u>Beds for Surgical ICU three folder</u></b> Size: 2120*970*450*/700mm Control by three cranks Angle back Section: 0 – 80 Angle of nee section: 0 – 40 Adjustable height : 250mm Integrated stamping frame and mattress base are steel made with epoxy bed head/foot board are made of ABS Plastic. Standard Accessory: Two sectional I. v pole four 5 silence luxurious caster aluminum alloy collapsible type side rails. (Imported Quality)  Strongman/Hilbro/Cutler or equivalent	24
2.	<b><u>Foam Mattresses</u></b> Size 6(L)* 4(W)* 6" (Thickness) superior quality equal to molty foam with warranty.  Master/Daimond or equivalent	24
3.	<b><u>Blankets Red 60x90</u></b>  <b><u>TECHNICAL SPECIFICATION:</u></b>  Woolen Made 6x6 Blankets Washable With Complete Stitching Side Coving.	24
4.	<b><u>Chair for library</u></b>  Frame made of sheesham talhi wood fancy design seat &	20



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	back cushioned.	
5.	<b><u>Chairs for Seminar Hall</u></b> Frame made of sheesham talhi wood fancy design seat & back cushioned.	20
6.	<b><u>Tables for seminar hall Large Size</u></b> Size 8(L)* 4(W)* 2½(H) made in oak veneer with dark walnut polish fancy design.	02
7.	<b><u>Chair for offices</u></b> Hi back revolving chair with gas lift and tilting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equaling)	20
8.	<b><u>Books Rack for library</u></b> Made by lamination 6(L)* 3(W)* 15" (D) with glass door edges bidding with talhi wood computer key looking system fancy design.	4
9.	<b><u>Chairs for laboratory</u></b> Frame made of she sham talhi wood seat cushioned without arms superior quality.	8
10.	<b><u>Tables for laboratory ( Medium size)</u></b> Size 8(L)* 4(W)* 2½(H) made by lamination Wood edges bidding with talhi wood.	2
11.	<b><u>Office table</u></b> Executive Office Table 6X3X2.5 made in oak Veneer with dark walnut polish Side rack 48x18x30 Made oak veneer with dark walnut polish. 1 key side rack has one keyboard 3 no drawers 1 Cpu compartment Vertical file box Internal shelf All drawers are run on galvanized antirust double bearing slide. Handle are aluminium brushed.	5
12.	<b><u>Revolving chair</u></b> Hi back revolving chair with gas lift and titting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equalient)	5
13.	<b><u>Bed side lockers</u></b> Made of ABS plastic with side out dinner board & one drawer	24



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	towel holder and sundry rack. (Imported Quality)	
14.	<b><u>Iron Cupboards</u></b> Made by steel iron plate size 6(L)* 4(W)* 18" (D) with inter looking system gauge 22.	10
15.	<b><u>Nursing Counter</u></b> -STANDARD SIZE. -WOODEN COMPATIBLE WITH FURNITURE.	4
16.	<b><u>Stools steel</u></b> Frame made by steel seat & back fiber plastic with hydraulic system & adjustable imported quality. (lattelst).	20
17.	<b><u>IV Stands steel</u></b> Metalic Base with steel stand adjustable (each stand should be posses four hangers and adjustable with beside bed)	48
18.	<b><u>Wheel chairs</u></b> <b><u>TECHNICAL SPECIFICATION:</u></b> S.S makes with seats and completes hydraulic break system with big wheels complete. China or equivalent	10
19.	<b><u>Stretures with side arms</u></b> <b><u>TECHNICAL SPECIFICATION:</u></b> S.S Top Powder Coded S.S Make With Wheels And 6x3 Ragzine Mattress	20

### **3- Other items**

S#	Name of Item	Qty
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i	<p><b><u>Air conditioners Split type 1.5 ton with stabilizers 10000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall and roof</li> <li>- Compatible branded stabilizer more than 12000 or equivalent.</li> </ul> <p>Dawlance/Haier/Orient or equivalent</p>	15
2	<p><b><u>Electric water cooler (with stabilizer) 5000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Capacity 35 Liters</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p>Fischer/Cannon or equivalent</p>	2
3	<p><b><u>Refrigerator (with stabilizer) 3000 watts</u></b></p> <ul style="list-style-type: none"> <li>- 15 cft</li> <li>- Two doors</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p>Dawlance/Orient/PEL or equivalent</p>	4
4	<p><b><u>Branded Desktop Computers with Monitor and latest laser Printer included and a camera latest &amp; with Servo Motor UPS (latest)</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Processors : Intel® Core™ i5-6500u, 4GB+1TB Hard drive 5x0 1333MHz (or higher) 4T/dual core/4M/73W/ LGA 1156</p> <p>Operating Systems :Genuine Windows® 7 Professional (64-bit) pre-installed (OEM media for OS and Drivers will be supplied by the vendor, (with licensed CD or back up CD)</p> <p>Chipset : Intel® Q57 chipset</p> <p>Form Factor • All-in-One</p> <p>RPM SATA8</p> <p>Memory • 4GB 1333 MHz DDR3 SoDIMM expandable Up to 4GB memory</p> <p>Optical Drive • DVD Recordable</p> <p>Integrated Communications • Intel® 82578DM, 10M/100M/1000M Gigabit Ethernet</p> <p>WiFi : Intel® Centrino® Wireless-N100 • Intel® Centrino® Ultimate-N6300</p> <p>Bluetooth • QMI 9WBM102QCE01Q2 • Qcom QBT410UB-012</p>	4



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GMMHC Hospital Sukkur

	<p>Ports:</p> <ul style="list-style-type: none"> <li>• (6) High speed USB 2.0 (2 side/4 rear)</li> <li>• (2) Side audio ports: headphone and microphone</li> <li>• (2) PS/2 ports</li> <li>• Serial2</li> <li>• Integrated display port</li> <li>• VGA-in</li> <li>• RJ-45</li> <li>• AC-in</li> </ul> <p>Slots • (1) Mini PCI-e x 1 slot • (1) Express card slot2          Bays • (1) Internal HDD Bay 3.5 inch • (1) Internal ODD Bay 5.25 inch          Display/Monitor : LED 18.5" HP          Graphics Card: Intel® GMA HD (integrated)          Power Supply • 150 W 85 plus (auto-senser)          Latest Printer HP/DELL or equivalent standard</p>	
5	<p><b><u>Multi Media with screen (Latest)</u></b>  <b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Bright projection – 4200 ANSI lumens XGA resolution, 20,000:1 contrast ratio, HDMI input Crestron RoomView® – RJ45 control and monitoring</p> <p>Display Technology Single 0.55" XGA DC3 DMD chip DLP® Technology by Texas Instruments Native Resolution XGA 1024 x 768 Brightness1 (Bright Mode) 4200 ANSI Lumens Contrast 20,000:1 Noise Level (Eco mode) 31dB Weight (kg) 2.57 I/O Connectors HDMI (1.4a 3D support), 2 x VGA (YPbPr/RGB), S-Video, Composite, 2 x Audio In 3.5mm, Audio Out 3.5mm, VGA Out, RS232, USB mouse/service, RJ45 Computer Compatibility UXGA, SXGA, XGA, SVGA, VGA, Mac Video Compatibility PAL (B, D, G, H, I, M, N, 4.43MHz), NTSC (M, J, 3.58MHz, 4.443MHz), SECAM (B, D, G, K, K1, L, 4.25.MHz, 4.4MHz, 480i/p, 576i/p, 720p(50/60Hz), 1080i(50/60Hz) 1080p(24/50/60Hz) Displayable Colours 1073.4 Million Projection Lens F/2.4~2.66; f=18.2~21.9mm, 1.2x Manual Zoom Throw Ratio 1.6 - 1.92:1 Projection Screen Size 0.78m– 7.79m (30.8" to 307") Diagonal 4:3 Projection Distance 1.2 - 12m Zoom Type 1.2x Manual Aspect Ratio 4:3 Native, 16:9 Compatible Offset 115% Horizontal Scan Rate 15.3 - 91.1kHz Vertical Scan Rate 24 - 85Hz Lamp Type 260W Lamp Life2 Eco+/Dynamic/Eco/Bright 7000/5500/5000/3000 (hrs) Keystone Correction ± 40° Vertical Dimensions (W x D x H) (mm) 315 x 224 x 102 Power Supply 100-240V, 50-60Hz Power Consumption 306W Bright mode / 257W Eco mode (&lt; 0.5W Standby) Operating Conditions 5°C - 40°C,</p>	1



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	<p>Max. Humidity 85%, Max. Altitude 3000m Uniformity 80%  Security Security bar, Kensington lock, password protection  Standard Accessories Carry bag, AC power cord, VGA cable,  remote control, battery, quick start card, CD user manual  Optional Accessories DLP® Link™ 3D glasses, wireless, ceiling mount  RoHS Compliant 3D Support Full 3D - The 3D features of Optoma  projectors can only be used with compatible 3D content. Typical  applications include use with 3D educational or 3D design and  modelling systems. 3D TV broadcast systems, (SKY in the UK),  Blu-ray 3D™ and 3D games from the Sony® PS3 or Microsoft®  Xbox 360 are now supported as part of the HDMI v1.4a  specification. 3D Compatibility Side-by-Side:1080i50 / 60, 720p50  / 60 Frame-pack: 1080p24, 720p50 / 60 Over-Under: 1080p24,  720p50 / 60 Speaker 10 On Screen Display 19 Languages: English,  German, French, Italian, Spanish, Portuguese, Polish, Dutch,  Russian, Finnish, Swedish, Greek,  Norwe<b><u>OPTIMA/SONY/PANASONIC or equivalent.</u></b></p>	
6	<p><b><u>Laptop (Latest Battery back up support for 2  hours or more including scanner with each  laptop preferable latest and high quality)</u></b></p> <ul style="list-style-type: none"> <li>- Processor Intel or Equivalent Core i7</li> <li>- 3.5 GHz preferable more</li> <li>- RAM at least 8 GB preferable more</li> <li>- Hard Disc at least 1 TB preferable more</li> <li>- DVD Rom with dual layer DVD (RW)</li> <li>- Ethernet from 100 to 1000 Mbps</li> <li>- DOS 2GB</li> <li>- LED 18" display</li> <li>- Video card / VRAM 256 MB preferable more</li> <li>Camera from 4 MP to 6 MP</li> </ul> <p><b><u>HP/Dell or equivalent</u></b></p>	4

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_



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## FINANCIAL OFFER

S.No.	Equipment description	Qty	Unit Price		Total Price	
			C&F	DDP	C&F	DDP

The financial proposals should be submitted as above mentioned proforma according to quoted items accordingly.

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_



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## ANNEXURE (C)

### 9. List of furniture/ fixture for Expansion of Causality Departments at GMC Hospital Sukkur

S#	Name of Item	Qty
1.	<p><b><u>Beds for Surgical ICU three folder</u></b></p> <p>Size: 2120*970*450*/700mm            Control by three cranks            Angle back Section: 0 – 80            Angle of nee section: 0 – 40            Adjustable height : 250mm            Integrated stamping frame and mattress base are steel made with epoxy bed head/foot board are made of ABS Plastic.            Standard Accessory: Two sectional I. v pole four 5 silence luxurious caster aluminum alloy collapsible type side rails.            (Imported Quality)            Strongman/Hilbro/Cutler or equivalent</p>	40
2.	<p><b><u>Foam Mattresses</u></b></p> <p>Size 6(L)* 4(W)* 6" (Thickness) superior quality equal to molty foam with warranty.            Water proof            Master/Daimond or equivalent</p>	40
3.	<p><b><u>Chair for offices</u></b></p> <p>Hi back revolving chair with gas lift and tilting back in p.p arm in stain resistant &amp; odour resistant polyolefin.            ( Equal to molty foam or Equaling)</p>	15
4.	<p><b><u>Office table</u></b></p> <p>Executive Office Table            6X3X2.5 made in oak            Veneer with dark walnut polish            Side rack 48x18x30            Made oak veneer with dark walnut polish.            1 key side rack has one keyboard            3 no drawers            1 Cpu compartment            Vertical file box            Internal shelf            All drawers are run on galvanized antirust double bearing slide.            Handle are aluminium brushed.</p>	05



5.	<b><u>Revolving chair</u></b> Hi back revolving chair with gas lift and titting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equalient)	05
6.	<b><u>Bed side lockers</u></b> Made of ABS plastic with side out dinner board & one drawer towel holder and sundry rack. (Imported Quality)	40
7.	<b><u>Iron Cupboards</u></b> Made by steel iron plate size 6(L)* 4(W)* 18" (D) with inter looking system gauge 22.	8
8.	<b><u>Nursing Counter</u></b> -STANDARD SIZE. -WOODEN COMPATIBLE WITH FURNITURE.	Per cft
9.	<b><u>Stools steel</u></b> Frame made by steel seat & back fiber plastic with hydraulic system & adjustable imported quality. (lattet).	10
10.	<b><u>IV Stands steel</u></b> Metalic Base with steel stand adjustable (each stand should be posses four hangers and adjustable with beside bed)	40
11.	<b><u>Wheel chairs</u></b> <b><u>TECHNICAL SPECIFICATION:</u></b> S.S makes with seats and completes hydraulic break system with big wheels completely with battery system. China or equivalent	10
12.	<b><u>Statures with side arms</u></b> <b><u>TECHNICAL SPECIFICATION:</u></b> S.S Top Powder Coded S.S Make With Wheels And 6x3 Ragzine Mattress / Fiber, sides, rounded door cushions with brochure.	10
13.	<b><u>Patient examination coach</u></b> Well built. State of the art Imported.	15
14.	<b><u>Dressing Table</u></b> Well built.	08



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	State of the art Imported.	
15.	<b><u>Patient waiting chair/Bench with stainless steel</u></b> Well built. State of the art Imported/ local with reputable company	50
16.	<b><u>Wooden benches steel side arms</u></b> Well built. State of the art Imported.	20

## 2- Other items

S#	Name of Item	Qty
1	<b><u>Air conditioners Split type 1.5 ton with stabilizers 10000 watts</u></b> <ul style="list-style-type: none"> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall and roof</li> <li>- Compatible branded stabilizer more than 12000 or equivalent.</li> </ul> Dawlance/Haier/Orient or equivalent	15
2	<b><u>Electric water cooler (with stabilizer) 5000 watts</u></b> <ul style="list-style-type: none"> <li>- Capacity 35 Liters</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> Fischer/Cannon or equivalent	02
3	<b><u>Refrigerator (with stabilizer) 3000 watts</u></b> <ul style="list-style-type: none"> <li>- 15 cft</li> <li>- Two doors</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> Dawlance/Orient/PEL or equivalent	04



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4

**Branded Desktop Computers with Monitor and latest laser jet color Printer included scanner and a camera latest & with Servo Motor UPS (latest)**

**TECHNICAL SPECIFICATION:**

Processors : Intel® Core™ i7-6500u last generation,  
4GB+1TB Hard drive 5x0 1333MHz (or higher) 4T/dual core/4M/73W/ LGA 1156

Operating Systems :Genuine Windows® 7 Professional (64-bit) pre-installed (OEM media for OS and Drivers will be supplied by the vendor, (with licensed CD or back up CD)

Chipset : Intel® Q57 chipset

Form Factor • All-in-One  
RPM SATA8

Memory • 4GB 1333 MHz DDR3 SoDIMM expandable  
Up to 4GB memory

Optical Drive • DVD Recordable

Integrated Communications • Intel® 82578DM, 10M/100M/1000M Gigabit Ethernet

WiFi : Intel® Centrino® Wireless-N100 • Intel® Centrino® Ultimate-N6300

Bluetooth • QMI 9WBM102QCE01Q2 • Qcom QBT410UB-012

Ports:

- (6) High speed USB 2.0 (2 side/4 rear)
- (2) Side audio ports: headphone and microphone
- (2) PS/2 ports2
- Serial2
- Integrated display port
- VGA-in
- RJ-45
- AC-in

Slots • (1) Mini PCI-e x 1 slot • (1) Express card slot2

Bays • (1) Internal HDD Bay 3.5 inch • (1) Internal ODD Bay 5.25 inch

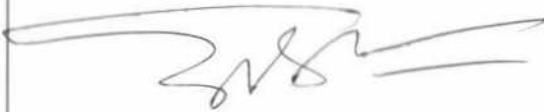
Display/Monitor : LED 18.5" HP

Graphics Card: Intel® GMA HD (integrated)

Power Supply • 150 W 85 plus (auto-senser)

Latest Printer HP/DELL or equivalent standard

05



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**(Medical Superintendent)**  
**GMMMC Hospital Sukkur**

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

### **FINANCIAL OFFER**

S.No.	Equipment description	Qty	Unit Price		Total Price	
			C&F	DDP	C&F	DDP

The financial proposals should be submitted as above mentioned proforma according to quoted items accordingly.

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_



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**ANNEXURE (D)**

**1). List of furniture/ fixture for expansion of OPD Departments at GMC Hospital Sukkur**

S#	Name of Item	Qty
1.	<b><u>Chair for offices</u></b> Hi back chair with gas lift and tilting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equaling)	100
2.	<b><u>Office table</u></b> Executive Office Table 6X3X2.5 made in oak Veneer with dark walnut polish Side rack 48x18x30 Made oak veneer with dark walnut polish. 1 key side rack has one keyboard 3 no drawers 1 Cpu compartment Vertical file box Internal shelf All drawers are run on galvanized antirust double bearing slide. Handle are aluminium brushed.	20
3.	<b><u>Revolving chair</u></b> Hi back revolving chair with gas lift and titting back in p.p arm in stain resistant & odour resistant polyolefin. ( Equal to molty foam or Equalient)	20
4.	<b><u>Iron Cupboards</u></b> Made by steel iron plate size 6(L)* 4(W)* 18" (D) with inter looking system gauge 22.	30
5.	<b><u>Nursing Counter</u></b> -STANDARD SIZE. -WOODEN COMPATIBLE WITH FURNITURE.	Cft.
6.	<b><u>Stools steel</u></b> Frame made by steel seat & back fiber plastic with hydraulic system & adjustable imported quality. (lattest).	40
7.	<b><u>IV Stands steel</u></b>	40

  
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 GMMHC Hospital Sukkur

	Metalic Base with steel stand adjustable (each stand should be posses four hangers and adjustable with beside bed)	
8.	<p><b><u>Wheel chairs</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>S.S makes with seats and completes hydraulic break system with big wheels complete.</p> <p>China or equivalent</p>	15
9.	<p><b><u>Stretures with side arms</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>S.S Top Powder Coded S.S Make With Wheels And 6x3 Ragzine Mattress</p>	10
10.	<p><b><u>Patient examination coach</u></b></p> <p>Well built. State of the art Imported.</p>	30
11.	<p><b><u>Patient waiting chair steel</u></b></p> <p>Well built. State of the art Imported.</p>	200
12.	<p><b><u>Wooden benches</u></b></p> <p>Well built. State of the art Imported.</p>	40

## **2- Other items**

S#	Name of Item	Qty
1	<p><b><u>Air conditioners Split type 1.5 ton with stabilizers 10000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Inverter with DC power.</li> <li>- Complete Installation with copper wire upto desired destination.</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall and roof</li> <li>- Compatible branded stabilizer more than 12000 or equivalent.</li> </ul>	30



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GMMHC Hospital Sukkur

	Pel/Dawlance/Haier/Orient/Mitshubishi or equivalent	
2	<p><b><u>Air conditioners Window type 1.5 ton with stabilizers 10000watts</u></b></p> <ul style="list-style-type: none"> <li>- Complete Installation with copper pipe upto desired destination.</li> <li>- DC inverter with remote control</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall and roof</li> <li>- Compatible branded stabilizer more than 12000 or equivalent.</li> </ul> <p><b>Dawlance/Orient/PEL or equivalent</b></p>	25
3	<p><b><u>Electric water cooler (with stabilizer) 5000 watts</u></b></p> <ul style="list-style-type: none"> <li>- Capacity 35 Liters</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p><b>Fischer/Cannon or equivalent</b></p>	10
4	<p><b><u>Refrigerator (with stabilizer) 3000 watts</u></b></p> <ul style="list-style-type: none"> <li>- 15 cft</li> <li>- Two doors</li> <li>- Complete Installation</li> <li>- Brackets / Racks for fixing</li> <li>- Complete fixing on wall</li> </ul> <p><b>Dawlance/Orient/PEL or equivalent</b></p>	10
5	<p><b><u>Branded Desktop Computers with Monitor and latest laser Printer included and a camera latest &amp; with Servo Motor UPS (latest)</u></b></p> <p><b><u>TECHNICAL SPECIFICATION:</u></b></p> <p>Processors : Intel® Core™ i5-6500u, 4GB+1TB Hard drive 5x0 1333MHz (or higher) 4T/dual core/4M/73W/ LGA 1156</p> <p>Operating Systems :Genuine Windows® 7 Professional (64-bit) pre-installed (OEM media for OS and Drivers will be supplied by the vendor, (with licensed</p>	10



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GMMMC Hospital Sukkur

	<p>CD or back up CD)  Chipset : Intel® Q57 chipset  Form Factor • All-in-One  RPM SATA8  Memory • 4GB 1333 MHz DDR3 SoDIMM expandable  Up to 4GB memory  Optical Drive • DVD Recordable  Integrated Communications • Intel® 82578DM, 10M/100M/1000M  Gigabit Ethernet  WiFi : Intel® Centrino® Wireless-N100 • Intel® Centrino®  Ultimate-N6300  Bluetooth • QMI 9WBM102QCE01Q2 • Qcom QBT410UB-012</p> <p>Ports:</p> <ul style="list-style-type: none"> <li>• (6) High speed USB 2.0 (2 side/4 rear)</li> <li>• (2) Side audio ports: headphone and microphone</li> <li>• (2) PS/2 ports2</li> <li>• Serial2</li> <li>• Integrated display port</li> <li>• VGA-in</li> <li>• RJ-45</li> <li>• AC-in</li> </ul> <p>Slots • (1) Mini PCI-e x 1 slot • (1) Express card slot2  Bays • (1) Internal HDD Bay 3.5 inch • (1) Internal ODD Bay 5.25  inch  Display/Monitor : LED 18.5" HP  Graphics Card: Intel® GMA HD (integrated)  Power Supply • 150 W 85 plus (auto-senser  Latest Printer HP/DELL or equivalent standard</p>	
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PROJECT DIRECTOR  
(Medical Superintendent)  
GMMMC Hospital Sukkur



Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

### **FINANCIAL OFFER**

S.No.	Equipment description	Qty	Unit Price		Total Price	
			C&F	DDP	C&F	DDP

The financial proposals should be submitted as above mentioned proforma according to quoted items accordingly.

Signature of tenderer : \_\_\_\_\_

Name & Designation : \_\_\_\_\_

Address: \_\_\_\_\_



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**GMMHC Hospital Sukkur**

## ANNEXURE (E)

### ★ LIST OF MACHIENRY / EQUIPMENTS FOR ORTHOPEDICS DEPARTMENTS AT GMC HOSPITAL SUKKUR

	<b><u>TECHNICAL OFFER</u></b>		<b>IMPORTANT</b> Please write YES / NO or deviation if any																				
S. NO:	Name of Items	Quantity																					
1	<p style="text-align: center;"><b><u>Double Oxygen line &amp; Double Air Line system</u></b></p> <p style="text-align: center;"><b><u>CENTRAL MEDICAL GASES SYSTEM</u></b></p> <p>Supplying / Installation of complete Medical Engineering System Comprising of: -</p> <p><b><u>COPPER PIPE</u></b></p> <ul style="list-style-type: none"> <li>• Imported Copper Pipe 18 Swg. de – Oxidised de – greased, half – hard, solid drawn with required copper fittings as follows: -           <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">Size</td> <td style="padding-right: 10px;">1"</td> <td style="padding-right: 10px;">-</td> <td>Rft.</td> </tr> <tr> <td></td> <td>3/4"</td> <td>-</td> <td>Rft.</td> </tr> <tr> <td></td> <td>1/2"</td> <td>-</td> <td>Rft.</td> </tr> </table> </li> <li>• <b><u>OUTLET POINTS</u></b> Medical Gases Outlet Points, Surface Type, wall – mounted In accordance with the Healthcare Technical Memorandum HTM 2022           <ul style="list-style-type: none"> <li>- Oxygen Outlet</li> <li>- Air Outlet – 4 bar</li> <li>- Nitrous Oxide</li> <li>- Vacuum Outlet Points</li> <li>- Air Outlet 7 bar</li> </ul> <b>(U.K/U.S.A/JAPAN)</b> </li> <li>• <b><u>ISOLATION VALVES</u></b> Isolation Valves with adaptor.           <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">Size</td> <td>3/8"</td> </tr> <tr> <td></td> <td>1/2"</td> </tr> <tr> <td></td> <td>3/4"</td> </tr> <tr> <td></td> <td>1"</td> </tr> </table> </li> </ul>	Size	1"	-	Rft.		3/4"	-	Rft.		1/2"	-	Rft.	Size	3/8"		1/2"		3/4"		1"	Central	
Size	1"	-	Rft.																				
	3/4"	-	Rft.																				
	1/2"	-	Rft.																				
Size	3/8"																						
	1/2"																						
	3/4"																						
	1"																						

  
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(U.K/U.S.A/JAPAN)

- **MEDICAL AIR PLANT SYSTEM**

Oil Free Air Compressor System

Comprising of: -

- I) 02 Nos. Air Compressor Sysetm  
**15 HP** (One in use and other stand by)
- II) 02 Nos. Refrigerated Air Dryers
- III) 02 Nos. Pre- Air Filter (5 Micron)
- IV) 02 Nos. After Air Filter (1 Micron)

(U.K/U.S.A/TAIWAN/KOREA/JAPAN)

- **BY PASS SYSTEM**

By pass system with  
Network of pipeline system and  
Isolation Valves to connect the stand  
By Compressor and refrigeration dryer  
In case of emergency. (LOCAL)

- **CONTROL PANEL**

Change over electric control panel  
Complete with installation for  
Compressor and Dryer.  
(LOCAL)

- **OXYGEN SUPPLY MANIFOLD**

The Manifold is a to switch from bank in use to

reserve

Bank without fluctuation in delivery supply line  
pressure  
and without the need for external power. After the  
switch-over  
the "reserve" bank becomes the "bank in use" and the  
bank in  
use becomes the reserve bank.

The system is able maintain continuous supply

1500LPM

Capacity (2 x 10) with capacity of 180 M3/H set of


conection

for cylinders/Hp. Valves , discharging valves, tell pipe

**Make: Local with Imported parts**

- **NITROUS OXIDE MANIFOLD (LOCAL)**

The Manifold is a to switch from bank in use to reserve  
Bank without fluctuation in delivery supply line pressure  
and without the need for external power. After the switch-  
over  
the "reserve" bank becomes the "bank in use" and the  
bank in

  
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	<p>use becomes the reserve bank.  The system is able maintain continuous supply 1500LPM  Capacity (2 x 4) with capacity of 50 M3/H set of conection  for cylinders/Hp. Valves , discharging valves, tell pipe  <b>Make: Local with Imported parts</b></p> <ul style="list-style-type: none"> <li>• <b><u>ZONE SERVICE UNITS (LOCAL)</u></b>  Zone Service Unit complete box  With Imported Isolation Valve and adaptor.</li> <li>• <b><u>MEDICAL GAS ALARM</u></b>  Supplying and installation of Alarm   System of different Gases  With mute / test facility, gives  Sound and flash light whenever  The pressure in line decreases  The set pressure for individual  Gas i.e  - Oxygen -  - Medical Air 4 bar -  (LOCAL)</li> <li>• <b><u>FLOWMETER SET</u></b>  Oxygen Flowmeter O – 15 LPM  Complete with Humidifier and probe  <b>(U.K/U.S.A/JAPAN)</b></li> <li>• <b><u>SUCTION INJECTOR UNIT</u></b>  Complete with 02 Ltrs (2000ml)  Collection jar and probe  <b>(U.K/U.S.A/JAPAN)</b></li> </ul>		
2	<p><b><u>ECG Machine 6 Channels</u></b></p> <ul style="list-style-type: none"> <li>- 06 channels or more than 06 channels ECG with compact and portable design,</li> <li>- 7 to 8” TFT Color LCD display with touch screen function,</li> <li>- One touch operation including gender and age group shortcuts,</li> <li>- Support bar code scanner to simplify workflow,</li> <li>- Weak signal detection with most advanced 24 bit A/D converter technology,</li> <li>- Anti noise technology with comprehensive filters and the high CMRR over 115dB,</li> <li>- 120s real time ECG waveforms freezing and review and assist diagnosis</li> </ul>	2	



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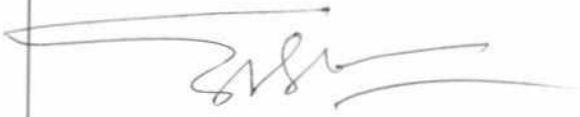
	<ul style="list-style-type: none"> <li>- Automatic measurement and interpretation tested with CSE/AHA/MIT database,</li> <li>- Extend printing once arrhythmia is detected to further your rhythm analysis,</li> <li>- Built-in rechargeable Li-ion battery, for more than 1.5 to 2 hours backup,</li> <li>- Built-in 200 or more ECG internal memory, LAN/WIFI/RS232 connection standard,</li> <li>- <b><i>Automatic measurement and interpretation test with authoritative CSE /AHA/MIT</i></b></li> <li>- Automatic analysis with gender and age specific, Pacemaker detection,</li> <li>- Anti noise with comprehensive filters with high CMRR over 115dB,</li> <li>- Heart rate variability analysis, Auto / manual work mode,</li> <li>- Built in Printer with Three printing formats auto, manual ad rhythm selectable</li> <li>- External USB printer port for connecting Laser printer/low cost printing,</li> <li>- Unit should be offered with complete standard accessories and mobile trolley.</li> </ul> <p>Note: Unit should be latest and FDA, TUV, CE and MDD approved.</p> <p><b>USA/UK/GERMANY/JAPAN Or equivalent</b></p>		
3	<p><b>ANAESTHESIA MACHINE WITH VENTILATOR</b></p> <p>Anaesthesia Machine 3 Gas (O2 / N2O / Air) with Ventilator and Two Vaporiser</p> <p>Anaesthesia Machine</p> <ul style="list-style-type: none"> <li>-Standard/Cascade flow tubes.</li> <li>-Cascade flow tubes with with electronic flow display providing numeric representation of gas flow</li> <li>-Virtual flow display (VFD) numeric and graphic</li> <li>-Virtual flow display also provides touch screen control of back lighting</li> </ul> <p>-03 Gas (O2 / N2O / Air) with ventilator Comprising of:-</p> <ul style="list-style-type: none"> <li>- 3 Gas (Oxygen / N2O / Air)</li> <li>- Two Vaporisers Mounting</li> <li>- 03 Gas Rotameter (O2 + N2O + Air)</li> </ul>	03	

  
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- Mechanical Anti – Hypoxic Device.
- Non – inter changeable pipeline inlets
- Pipeline & Cylinder gauges for O2 + N2O+ Air  
alongwith hoses.
- Pin Index cylinder yokes.
- Gas Outlet and O2 flush control.
- O2 Auxiliary O2 power outlets.
- Lockable castors.
- Monitors Shelf.
- Impact resistant & easy to clean frame.
- Stainless steel work surface.
- Absorber support arm.
- O3 Gas flowmeter for O2 + N2O + Air.
- Sigma Delta Sevoflurane Vaporizer.
- Flow and Temperature compensated (Service Free)
- Base lockable 6” Drawer unit.
- Main power outlet 220 / 240 Vac (IEC X 4)
- Writing Shelf / Platform.
- Sharp holder.
- High suction Controller with receiver jar of  
1.8 Ltrs complete with connections and fittings.
- SPA Carbon Dioxide Absorber with Bag  
Vent and By Pass complete with detachable
- The system must have built in heater to control  
moisturizer

**Electronic Anesthesia Ventilator**

- 12” Large Colour Touch Screen Anesthesia Ventilator  
With Built – in Oxygen Monitor,  
Ultra – accurate Spirometry  
With advance Ventilation (SIMV,SMMV and PSV)
- Combines sophistication and ease of use,
- Volume and Pressure Ventilation plus  
SMMV,SIMV,PSV and PEEP
- Single / dual waveform display
- High quality , multi-option product with flexible  
specification
- Integrated Oxygen Monitor and spirometry
- Inverse I:E Ratio capability
- Electronic PEEP
- Autoclavable Latex free bellows
- Oxygen or Air drive gas
- Battery Back up
- Magills Breathing Circuit
- Must have HIS capability (Hospital Information System)
- Tidal Volume from 5ml to 1600ml.



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	-Should have 30 minute battery backup		
	<u>UK/USA/JAPAN Or equivalent</u>		



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**OT Table**

Complete with standard accessories.

Electro Hydraulic Table for General Surgery with power floor lock, table slide & foot pump.

It should be Heavy Duty.

System operated with hand control and foot pump for functions below:

- a. Height - Up and Down
- b. Slide
- c. Tilt - Right and Left
- d. Trendelungburg/Reverse
- e. Back - Up and Down
- f. Lock/Unlock

Override (Auxiliary) control located on the base of the table away from the sterile field.

Hand control with back lit illumination.

Four electro-hydraulic, powered, self-adjusting posts that can be leveled up to 5 mm.

Patient weight capacity 350 Kg, **in all possible positions and articulations, including reverser orientation.**

Built in x-ray cassette channel.

Radio translucent table top.

Self-diagnosis system with instant error code display to facilitate trouble shooting and servicing.

Hand control must have emergency stop button.

Hand control must have one touch button for "flex", "reflex", "Level".

The table should have longitudinal slide of 300 mm or more so as to obtain unobstructed C-arm access.

Head section and leg section can be interchanged to provide maximum x-ray translucent distance to the surgeon.

Hand control has reverse orientation mode available to facilitate the operation during reverse positioning.

The base and column of the table must be constructed with high quality medical stainless steel (Grade 304, non-reflecting surface, antibacterial and easy to clean.

**Range of table movements**

Head up and down	+90/-90 degrees
Back up and down	+80/-50 degrees
Leg up and down	+30/-90 degrees
Split leg manual movement	+90/-90 degrees
Lateral tilt	+20/-20 degrees
Trendelenburg/Reverse Trendelenburg	+30/-30 degrees
Height range	680 mm to 1120 mm

Electro Hydraulic Table for General Surgery with power floor lock, table slide & foot pump.

It should be Heavy Duty.

**USA/UK/GERMANY/JAPAN Or equivalent**



5	<p><b><u>Ceiling OT Light With Satellite Arm:</u></b></p> <ul style="list-style-type: none"> <li>• Adjustable light intensity 160,000 LUX at 1 meter distance</li> <li>• Satellite combination of 160,000 LUX at 1 meter</li> <li>• Dual Arm Ceiling Light With 160,000 Lux + 160,000 Lux at 1meter</li> <li>• LED Shadow Less Operation Light</li> <li>• Integrated HD camera system</li> <li>• Main Light Head 160,000 lux</li> <li>• Satellite Arm 160,000 lux</li> <li>• Colour Temperature 4,500°Kelvin or better.</li> <li>• Electronic control panel With LCD display for light field diameter and light adjustment.</li> <li>• Color rendition index of 95.</li> <li>• LED life 50,000 hours</li> <li>• Autoclave able handles.</li> <li>• LCD Display for Camera System</li> <li>• Operating Voltage 100 -220V, 50Hz.</li> </ul> <p><b><u>Country of Origin:</u> UK, USA, West-Europe and Japan</b></p>	02	
6	<p><b><u>Diathermy</u></b></p> <p>Output of 400 to 500w in continuous mode and 800 to 1100 w in pulse repetition frequency of 20 to 200 Hz adjustable in 10 steps LCD display of parameter Treatment timer with all standard accessories electrode pad with cable Dis electrodes with arms and cables. Patient safety system</p> <p>4.</p> <p><b>System configuration Accessories spares and consumables</b> As specified</p> <p>5.</p> <p><b>Environmental factors</b></p> <p>5.1 Enviromental factors to be complied</p> <ol style="list-style-type: none"> <li>1. Shall meet IEC-606-1-1-:2001 (or Equivalent BIS) General Requirements for safety for Electromagnetic compatibility or should comply with 89/324/EEC EMCdi</li> <li>2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%</li> <li>3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%</li> </ol> <p>6.</p> <p><b>Power Supply</b></p> <ol style="list-style-type: none"> <li>6.1 1. Power input to be 220-240 VAC, 50Hz fitted with Indian Plug</li> <li>2. UPS of suitable rating with voltage regulation and spike protection</li> </ol>	2	

  
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