

NOTICE INVITING TENDER (NIT)

No. DUHS/DP/2017/ 26 Dated 21 September 2017

Bids are invited under sealed cover for the **Procurement of Hospital Equipment / Instruments** on DDP / C&F basis from authorized Dealers / Distributors / Manufacturers, having registration with Federal Board of Revenue (FBR) for Income Tax and Sales Tax.

Tender Fee	Rs. 2,000/- (Rupees two thousand only) Non-Refundable in shape of Pay Order / Demand Draft in favor of Dow University of Health Sciences, Karachi
Bidding Procedure	Single Stage – Two Envelope
Bid Security	2% of the total bid value.
Purchasing Date & Time	25 September 2017 to 10 October 2017
Bids Delivery Date & Time	11 October 2017 at 11:00 a.m.
Bid Opening Date & Time	11 October 2017 at 11:30 a.m. In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening, bids shall be submitted / opened on next working day at the given time.

Bidding document may be purchased by interested bidders on the submission of a written application, NTN, GST Certificates and Pay Order / Demand Draft of tender fee during office hours. Bidding Documents are also available at DUHS and SPPRA websites. Interested Bidders may obtain further information personally from 11:00 A.M. to 02:00 P.M.

Conditional Bids, Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, bids received after specific date and time and bids of Black Listed firms will be rejected.

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPP Rules 2010 (Amended 2013).



Director Procurement
Dow University of Health Sciences (Ojha Campus)
Procurement Directorate at Library Block,
SUPARCO Road, off Main University Road,
Gulzar-e-Hijri, Scheme No. 33, Karachi.
Phone No. + 92-21-99261497
Email: director.procurement@duhs.edu.pk



Published in Daily Jang on 22nd September, 2017



DOW UNIVERSITY OF HEALTH SCIENCES

طبی ٹینڈرنوٹس

نمبر: DUHS/DP/2017/26 تاریخ: 21 ستمبر، 2017

ہسپتال انکوپنسٹ/انسٹرومنٹس کی فراہمی کیلئے ڈی ڈی پی/ای ایڈ ایف کی بنیاد پر انکم ٹیکس اور سیلز ٹیکس کیلئے فیڈرل بورڈ آف ریونیو (ایف بی آر) سے رجسٹرڈ انکوپنسٹ چارکنٹہ گان/گمازڈ ٹنڈرا ڈسٹری بیوٹرز سے سربراہیوں مطلوب ہیں۔

2,000/- (دو ہزار روپے) ناقابل واپسی	ٹینڈر فیس
بٹل سپارڈر ڈیمانڈ ڈرافٹ، نام ڈاؤن نیورٹی آف ہیلتھ سائنسز، کراچی	
سنگل اسٹیج دولٹانے	بڈ تک طریقہ کار
ٹھل بولی کا 2%	بولی کی سیکورٹی
25 ستمبر، 2017-10 اکتوبر، 2017	بولی دستاویزات خریدنے کی تاریخ
11 اکتوبر، 2017 بوقت صبح 11:00 بجے	بولیاں پہنچانے کی آخری تاریخ اور وقت
11 اکتوبر، 2017 بوقت صبح 11:30 بجے	بولی کھلنے کی تاریخ اور وقت

ٹینڈر کھلنے کی تاریخ پر اگر غیر موقع صورتحال یا حکومت کی جانب سے جھٹکی کے پیش نظر آفس بند ہو جائے تو بولیاں اسکا گلے ہی دن دینے کے وقت پر جمع آنکھولی جائیں گی۔

دلچسپی رکھنے والے بولی دہندگان بولی دستاویزات درج ذیل پتے سے تحریری درخواست کے ساتھ این ٹی این، بی ایس ٹی سرٹیفکیٹس اور ٹینڈر فیس کا پے آرڈر ڈیمانڈ ڈرافٹ دفتری اوقات کار کے درمیان جمع کروا کر حاصل کر سکتے ہیں۔ بولی دستاویزات ڈی پوائنٹ ایس/ایس بی پی آر اے کی ویب سائٹس پر بھی دستیاب ہیں۔ بولی دہندگان مزید معلومات بذاتہ خود صبح 11:00 بجے سے دوپہر 02:00 بجے تک حاصل کر سکتے ہیں۔

مشروط بولیاں، ٹیلی گراف بڈ مطلوبہ بڈ سیکورٹی کے بغیر مقررہ تاریخ اور وقت کے بعد وصول پانے والی بولیاں، بلیک لسٹ فرم کی جانب سے دی گئیں بولیاں قابل قبول نہیں ہوں گی۔

ڈاؤن نیورٹی آف ہیلتھ سائنسز، کراچی (ڈی پوائنٹ ایس) ایس بی پی ٹی قوانین 2010 (ترمیم شدہ 2013) کی متعلقہ شق کے تحت کسی ایک یا تمام بولیوں کو منسوخ کرنے کا حق محفوظ رکھتی ہے۔

ڈائریکٹر پروکیورمنٹ
 ڈاؤن نیورٹی آف ہیلتھ سائنسز (ادھما کیپس)،
 پروکیورمنٹ ڈائریکٹریٹ لائبریری بلاک
 سپارکو روڈ آف سین یونیورسٹی روڈ گلزار جہری، ایسٹیم نمبر 33، کراچی
 فون: +92-21-99261497
 ای میل: director.procurement@duhs.edu.pk

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Baba-e-Udu Road, Karachi - 74200 Pakistan.
 Tel: 021-99215065 Fax: 021-99215065

Published in Daily Dawn on 22nd September, 2017



DOW UNIVERSITY OF HEALTH SCIENCES

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No. DUHS/DP/2017/26
Dated: 21 September 2017

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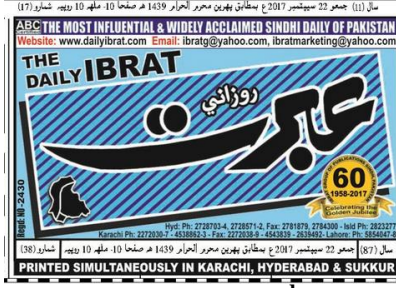
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PID/K/964/18



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DOW UNIVERSITY OF HEALTH SCIENCES

ٽينڊر گھرائڻ لاءِ نوٽيس

نمبر: DUHS/DP/2017/26 تاريخ: 21 سيپٽمبر 2017

اسپتال ايڪويمنٽ/انسٽرومنٽس جي فراهمي لاءِ ڊي ڊي پي/سي اينڊ ايف جي بنياد تي انڪر ٽيڪس ۽ سيلز ٽيڪس لاءِ فيڊرل بورڊ آف روينيو (ايف بي آر) سان رجسٽرڊ ايڪويمنٽ تيار ڪندڙن/مجاز ڊيلرن/ڊسٽري بيوٽرز کان مھربند واک گھريل آھن

2000 روپيا (ٻه هزار روپيا) نه وڌڻ جوڳا ٻي آرڊر/ڊمانڊ ڊرافٽ جي صورت ۾ ڊائو يونيورسٽي آف هيلٿ سائنسز، ڪراچي جي نالي	ٽينڊر في
سنگل اسٽيج ٻه لفافا	بڊنگ جو طريقو
ڪل واک جو 2 سيڪڙو	واک جي سيڪيورٽي
25 سيپٽمبر 2017 کان 10 آڪٽوبر 2017 تائين	واک دستاويز خريد ڪرڻ جي تاريخ
11 آڪٽوبر 2017 وقت صبح 11:00 وڳي	واک پهچائڻ جي آخري تاريخ ۽ وقت
11 آڪٽوبر 2017 وقت صبح 11:30 وڳي	واک کولڻ جي تاريخ ۽ وقت

ٽينڊر کولڻ جي تاريخ تي جيڪڏهن غير امڪاني صورتحال يا حڪومت پاران موڪل جي ڪري آفيس بند ٿيندي ته واک ان جي ايندڙ ڏينهن ڏنل وقت تي جمع ڪري / کوليا ويندا.

دلچسپي رکندڙ واک ڏيندڙ واک دستاويز هيٺ ڄاڻايل پتي تان لکت ۾ درخواست سان اين ٿي. جي ايس ٽي سرٽيفڪيٽس ۽ ٽينڊر في جو ٻي آرڊر/ڊمانڊ ڊرافٽ آفيس وقت دوران جمع ڪرائي حاصل ڪري سگهن ٿا. واک دستاويز ڊي يو ايج ايس/ايس بي آر اي جي ويب سائيٽ تي به دستياب آهن. واک ڏيندڙ وڌيڪ معلومات پنهنجي سر پاڻ صبح 11:00 وڳي کان منجهند 2:00 وڳي تائين حاصل ڪري سگهن ٿا. شرطي واک ٽيلي گراف ٻڌ، گھريل ٻڌ سيڪيورٽي بنا، مقرر تاريخ ۽ وقت کان پوءِ وصول ٿيندڙ واک، بليڪ لسٽ فرم پاران ڏنل واک قبول نه ڪيا ويندا.

ڊائو يونيورسٽي آف هيلٿ سائنسز ڪراچي ڊي يو ايج ايس، ايس بي پي قانون (2013) ۾ ترميم ٿيل) جي لاڳاپيل شقن تحت ڪنهن هڪ يا سمورن واکن کي رد ڪرڻ جو حق محفوظ رکي ٿي.

ڊائريڪٽر پروفيسر پروڪيورمنٽ
 ڊائو يونيورسٽي آف هيلٿ سائنسز (اوجها ڪيمپس)
 پروفيسر پروڪيورمنٽ ڊائريڪٽوريٽ لائبريري بلاڪ
 سڀاڪو روڊ آف مين يونيورسٽي روڊ، گلزار هجري، اسڪيم نمبر 33، ڪراچي

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Office of the Registrar

Dow University of Health Sciences, Karachi.

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Phone: 021-99216901
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Ref. No. DUHS/Reg./2017/- 2125

Dated: 09th May, 2017.

MEMORANDUM

With the approval of the Competent Authority, in pursuance of Rule 31 of the Sindh Public Procurement Rules 2010 (Amended 2013) Dow University of Health Sciences is pleased to constitute a Complaint Redressal Committee (CRC) with the following composition to resolve the complaints of aggrieved bidders:-

- | | |
|--|----------|
| 1. Vice Chancellor
Dow University of Health Sciences, Karachi | Chairman |
| 2. Representative of Accountant General
Government of Sindh | Member |
| 3. Independent Professional Expert(s)
(To be nominated from relevant field) | Member |

ToRs

- To perform according to Rule 31 of SPPRA Rules 2010 (Amended 2013); and
- To perform any other function ancillary and incidental to above.

(Professor Amanullah)
Registrar,
Dow University of Health Sciences
Karachi.

Copy to:

1. The Chairman of the Committee.
2. All Members of the Committee.
3. PA to the Vice Chancellor, DUHS.



Office of the Registrar

Dow University of Health Sciences, Karachi.

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Karachi-74200
Pakistan
Phone: 021-99216901
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registrar@duhs.edu.pk

Ref. No. DUHS/Reg./2017/-08-42

Dated: 15th August, 2017.

MEMORANDUM

Subject: PROCUREMENT COMMITTEE, DUHS.

With the approval of the Competent Authority, a Procurement Committee is hereby re-constituted comprising of the following composition with immediate effect and until further orders:-

- | | | |
|----|---|--------------------|
| 1. | Pro-Vice Chancellor,
Dow University of Health Sciences,
Karachi. | Chairman |
| 2. | Registrar,
Dow University of Health Sciences,
Karachi. | Member/Coordinator |
| 3. | Director Finance,
Benazir Bhutto Shaheed University
Lyari, Karachi. | Member |
| 4. | Director Finance,
Dow University of Health Sciences,
Karachi. | Co-opted Member |
| 5. | Concerned Dean/Principal/Director
Dow University of Health Sciences,
Karachi. | Co-opted Member |

2. The Committee shall perform its functions in accordance with the SPP Rules 2010 (Amended 2013).

(Professor Amanullah)
Registrar,
Dow University of Health Sciences
Karachi.

Copy to:

1. The Chairman of the Committee.
2. All Members of the Committee.
3. PA to the Vice Chancellor, DUHS.
4. PA to the Pro-Vice Chancellor, DUHS.



DOW UNIVERSITY OF HEALTH SCIENCES

PROCUREMENT PLAN FOR THE FINANCIAL YEAR 2017-18

S.No	Description of Items / Institutes	Quantity (Where applicable)	Estimated unit cost (Where applicable)	Estimated total Cost	Funds Allocated	Source of funds (ADP / Non-ADP)	Proposed procurment method
1	Procurement of Equipment / Instruments / Ancillaries for Strengthening of Institute of Physical Medicine and Rehabilitation of Disable at DUHS, Karachi				101.000	ADP	Open competitive Bidding
2	Procurement of Equipment / Instruments for Dow Diagnostics Research & Reference Lab.				30.000	Non-ADP	Open competitive Bidding
3	Procurement of Equipment / Instruments for Dow College of Pharmacy				17.000	Non-ADP	Open competitive Bidding
4	Procurement of Equipment / Instruments for Food Lab. at School of Public Health				10.000	Non-ADP	Open competitive Bidding
5	Procurement of Equipment / Instruments for D.R.I.B.B.S / DCOB				55.000	Non-ADP	Open competitive Bidding
6	Procurement of Equipment / Instruments & Hospital Furniture / Fixture for O.T. Complex / Dow Hospital				130.000	Non-ADP	Open competitive Bidding
7	Procurement of Equipment / Instruments for Dow RAD				130.000	Non-ADP	Open competitive Bidding
8	Procurement of Equipment / Instruments for Ophthalmology Department				41.000	Non-ADP	Open competitive Bidding
9	Procurement of I. T. Servers, Lap Tops, Computers, Software and Ancillaries				75.000	Non-ADP	Open competitive Bidding
10	Procurement of Vascular Interventous Radiology Catherers / Disposables / Consumables / Surgicals				45.000	Non-ADP	Open competitive Bidding
11	Procurement of Equipment / Instruments for Renal Transplant Unit				60.000	Non-ADP	Open competitive Bidding
12	Procurement of Equipment / Instruments for Bone Marrow Transplant Unit				123.100	Non-ADP	Open competitive Bidding
13	Procurement of Equipment / Instruments for Animal Sciences				4.156	Non-ADP	Open competitive Bidding
14	Procurement of Equipment / Instruments for ASV Project				25.629	Non-ADP	Open competitive Bidding



DOW UNIVERSITY OF HEALTH SCIENCES

PROCUREMENT PLAN FOR THE FINANCIAL YEAR 2017-18

S.No	Description of Items / Institutes	Quantity (Where applicable)	Estimated unit cost (Where applicable)	Estimated total Cost	Funds Allocated	Source of funds (ADP / Non-ADP)	Proposed procurment method
15	Procurement of Equipment / Instruments for National Insstitute of Liver & Gastro intestinal diseases / Liver Transplant Unit				80.000	Non-ADP	Open competitive Bidding
16	Procurement of Equipment / Instruments for DUHS Clifton				90.000	Non-ADP	Open competitive Bidding
17	Procurement of Equipment / Instruments to enhance the Security Measures				50.000	Non-ADP	Open competitive Bidding
18	Procurement of Drugs / Medicines / Consumables / Disposables / Instruments				222.000	Non-ADP	Open competitive Bidding
19	Procurement of Diagnostic Kits / Reagents / Consumables / Ancillaries				55.200	Non-ADP	Open competitive Bidding
20	Procurement of Dental Equipment / Instruments / Material / Implants / Teaching Aids				56.350	Non-ADP	Open competitive Bidding
21	Procurement of Implants / Surgical / Catheters / Disposables / Consumables etc.				47.667	Non-ADP	Open competitive Bidding
22	Procurement of Cardiology & Cardiac Surgery Catheters / Disposables / Conmsumable for Angiogrpahy PTCA, Bypass				50.000	Non-ADP	Open competitive Bidding
23	Procurement of Disposables / Surgical Goods / Artificial Body Parts / Limbs				47.668	Non-ADP	Open competitive Bidding
24	Strengthening the various Departments & Institutes by providing Equipment / Instruments & General Electrical Appliances.				40.000	Non-ADP	Open competitive Bidding
25	Procurement of Office Stationery / General Items / Animal Food / Uniform & Liveries / Linen articles				31.000	Non-ADP	Open competitive Bidding
26	Procurement of Printing & Publication				18.320	Non-ADP	Open competitive Bidding
27	Strengthening the various Departments & Institutes by providing Furniture / Fixture				35.000	Non-ADP	Open competitive Bidding
28	Procurement of Services for Convocation 2017				12.000	Non-ADP	Open competitive Bidding



DOW UNIVERSITY OF HEALTH SCIENCES

PROCUREMENT PLAN FOR THE FINANCIAL YEAR 2017-18

S.No	Description of Items / Institutes	Quantity (Where applicable)	Estimated unit cost (Where applicable)	Estimated total Cost	Funds Allocated	Source of funds (ADP / Non-ADP)	Proposed procurment method
29	Hiring the Consultant Services				12.000	Non-ADP	Open competitive Bidding
30	Hiring the Janitorial Services				98.000	Non-ADP	Open competitive Bidding
31	Hiring the Security Services.				85.000	Non-ADP	Open competitive Bidding
32	Hiring the Services for Repair & Maintenance of Lifts				4.000	Non-ADP	Open competitive Bidding
33	Hiring the Services for Repair & Maintenance of Generators				5.000	Non-ADP	Open competitive Bidding
34	Hiring the Services for Repair & Maintenance of U.P.S				4.000	Non-ADP	Open competitive Bidding
35	Hiring the Services for Repair & Maintenance of Airconditioning				4.000	Non-ADP	Open competitive Bidding
36	Hiring the Health Insruance Service				80.000	Non-ADP	Open competitive Bidding
37	Operation of Point Buses				90.000	Non-ADP	Open competitive Bidding
38	Hiring the Services for Testing Agency				25.000	Non-ADP	Open competitive Bidding
39	Printing of Prospectus for MBBS & BDS				7.500	Non-ADP	Open competitive Bidding
40	Procurement of Two Modules of Accounting Software (General Ledger and Payroll) and Hardware (Server)				10.000	Non-ADP	Open competitive Bidding



BIDDING DOCUMENT
Single Stage - Two Envelope Bidding Procedure

**PROCUREMENT OF
HOSPITAL AND LAB. EQUIPMENT / INSTRUMENTS**

N.I.T No. DUHS/DP/2017/- 26 Dated 21 September 2017

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A: Instructions to Bidders. (ITB)

1. INTRODUCTION

1. GENERAL

1.1 Dow University of Health Sciences (DUHS), Karachi has allocated fund towards the cost of **“Procurement of Hospital Equipment / Instruments”**. It is intended that part of the proceeds of this fund will be applied to eligible payments under the contract for the Procurement of goods.

2. ELIGIBLE BIDDERS

2.1. This Invitation for Bids is open to all original Manufacturers, within Pakistan and abroad, and their Authorized Agents / Importers / Bidders / Distributors.

2.2. Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the University to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation for Bids.

2.3. Government-owned enterprises may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Federal Govt. or Provincial Govt.

2.4. Bidder should not be eligible to bid if they are under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government organization in accordance with sub **clause 35.1**.

3. ELIGIBLE GOODS

3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries and all expenditures made under the contract shall be limited to such goods and services. For this purpose, the term “Goods” includes any Goods that are the subject of this Invitation for Bids and the term “Services” shall include related services such as transportation, insurance etc. **The “Origin” means the place where the “goods” are mined, grown, or produced, or the place from which the “related services” are supplied.** Goods are produced through manufacturing or processing, or substantial and major assembly of ingredients / components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

2. THE BIDDING PROCEDURE

4. Single Stage - Two Envelope Procedure

- (a) Bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal;
- (b) Envelopes shall be marked as “FINANCIAL PROPOSAL” and TECHNICAL PROPOSAL” in bold and legible letters to avoid confusion;
- (c) Initially, only the envelope marked “TECHNICAL PROPOSAL” shall be opened;
- (d) Envelope marked as “FINANCIAL PROPOSAL” shall be retained in the custody of the procuring agency without being opened;
- (e) Procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;
- (f) No amendments in the technical proposal shall be permitted during the technical evaluation;
- (g) Financial proposals of technically qualified bids shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;
- (h) Financial proposal of bids found technically non-responsive shall be returned un-opened to the respective bidders; and
- (j) Bid found to be the lowest evaluated or best evaluated bid shall be accepted.

4.2 The bids shall be opened in the presence of bidders or their authorized representative at the prescribed time, date and venue.

3. THE BIDDING DOCUMENTS

5. CONTENTS OF BIDDING DOCUMENTS

5.1 The Bidding Documents:

In addition to the Invitation for Bids (IFB) / Tender Notice, the bidding documents include:

- i. Instructions to Bidders (ITB);
- ii. General Conditions of Contract (GCC);
- iii. Special Conditions of Contract (SCC);
- iv. Schedule of Requirements;
- v. Technical Specifications;
- vi. Contract Form;
- vii. Manufacturer's Authorization Form;
- viii. Performance Guarantee Form;
- ix. Bid Form; and
- x. Price Schedules.

5.2 In case of discrepancies between the Invitation for Bids (IFB) / Tender Notice and the Bidding Documents, the Bidding Documents shall take precedence.

5.3 The bidders are expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish complete information required in the bidding documents or to submit a bid not substantially responsive to the bidding documents may result in rejection.

6. AMENDMENT OF BIDDING DOCUMENTS

6.1 At any time prior to the deadline for submission of bids, the Procuring Agency may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the bidding documents by amendment.

6.2 All prospective bidders that have received the bidding documents will be notified the amendment(s) in writing, which will be binding on them.

6.3 In order to allow prospective bidders reasonable time to take the amendment(s) into account in preparing their bids, the Procuring Agency may, at its discretion, extend the deadline for submission of the bids.

4. PREPARATION OF BIDS

7. LANGUAGE OF BID

7.1 Preparation of Bids

The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and the Procuring Agency shall be in English. Supporting documents and printed literature furnished by the bidder may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case for purposes of interpretation of the Bid, the translated version shall prevail.

8. DOCUMENTS COMPRISING THE BID

8.1 The bid prepared by the Bidder shall comprise the following:

- (a) Bid Form;
- (b) Price Schedule;
- (c) Documentary evidence to the effect that the Bidder is eligible to bid and is qualified to perform the Contract if its bid is accepted;
- (d) Documentary evidence to the effect that the goods to be supplied by the Bidder are eligible goods and related services as defined in clause-3 and conform to the bidding documents; and
- (e) Bid Security.

9. BID PRICES

9.1 The prices and discounts quoted by the Bidder in the Bid Form and in the Price Schedules shall conform to the requirements specified below.

- 9.2 All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Items not listed in the Price Schedule shall be assumed not to be included in the Bid.
- 9.3 The price to be quoted in the Bid Form shall be the total price of the Bid excluding any discounts offered.
- 9.4 The Bidder shall quote any unconditional discounts and the methodology for their application in the Bid Form.
- 9.5 Prices proposed in the Price Schedule Forms for Goods, shall be disaggregated, when appropriate. This disaggregation shall be solely for the purpose of facilitating the comparison of Bids by the Procuring Agency. This shall not in any way limit the Procuring Agency's right to contract on any of the terms offered:
- (a) Price Schedule For Goods offered from within the Procuring Agency's country:
 - (i) Detailed Specification of Stores
 - (ii) Model / Cat No.
 - (iii) Name of Manufacturer.
 - (iv) Country of Origin
 - (v) Quantity of Stores
 - (vi) Unit
 - (vii) the unit price of the goods quoted on delivered duty paid (DDP) basis, including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of goods, or on the previously imported goods of foreign origin;
 - (viii) If there is no mention of taxes, the offered/quoted price will be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes during the contract period shall be passed on to the Procuring Agency; and
 - (ix) the total price for the item.
 - (b) Price Schedule For Goods offered from outside the Procuring Agency's country:
 - (i) Detailed Specification of Stores
 - (ii) Model / Cat No.
 - (iii) Name of Manufacturer.
 - (iv) Country of Origin
 - (v) Quantity of Stores
 - (vi) Unit

(vii) Currency of Bid

(viii) the unit price of the goods quoted on CFR / C&F basis (Karachi Port), in the Procuring Agency's country;

(ix) the total price for the item in foreign currency.

9.6 Final Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected.

9.7 If it was proved during the contract period that bidder has supplied the contracted item(s) to any other purchasing agency in Pakistan at the prices lower than the contracted prices, the balance amount will be deducted from the bill and / or security deposit of the bidder.

10. BID CURRENCIES

10.1 Prices shall be quoted in Pakistani Rupees for goods offered within the Procuring Agency's country on delivered duty paid (DDP).

10.2 Price shall be quoted in foreign currency for goods offered outside the Procuring Agency's country on CFR / C&F Basis.

11. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION

11.1 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Procuring Agency's satisfaction:

- (a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' Manufacturer or producer to supply the goods in the Procuring Agency's country;
- (b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
- (c) that, in the case of a Bidder not doing business within the Procuring Agency's country, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped, and able to carry out the Bidder's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- (d) that the Bidder meets the evaluation & qualification criteria of bidding document.

12. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

12.1 Pursuant to ITB Clause 8, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding

documents of all goods and services which the Bidder proposes to supply under the contract.

- 12.2 The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule of the country of origin of the goods and services offered which shall be confirmed by a certificate of origin issued at the time of shipment.
- 12.3 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and data, and shall consist of:
 - (a) a detailed description of the essential technical and performance characteristics of the goods; and
 - (b) an item-by-item commentary on the Procuring Agency's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 12.4 For purposes of the commentary to be furnished pursuant to ITB Clause 12.3(b) above, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring Agency in its Technical Specifications, are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names, and/or catalogue numbers in its bid, provided that it demonstrates to the Procuring Agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

13. BID SECURITY

- 13.1 The Bidder shall furnish, as part of its proposal, a Bid Security in the amount and currency specified in the Bid Data Sheet and SCC. Unsuccessful bidders' Bid Security will be returned soon after approval of the successful Bidder. The successful Bidder's Bid Security will be discharged upon signing of contract and furnishing the Performance Security bond, duly guaranteed by a scheduled bank.
- 13.2 The Bid Security shall remain valid for a period of 28 days beyond the bid validity period.
- 13.2 The Bid Security is required to protect the Procuring Agency against the risk of Bidder's conduct, which would warrant the Security's forfeiture;
- 13.3 The Bid Security may be forfeited:
 - (a) if a Bidder withdraws its bid during the period of bid validity; or
 - (b) in the case of a successful Bidder, the Bidder fails:
 - (i) to sign the Contract; or
 - (ii) to complete the supplies in accordance with the General Conditions of Contract.

14. BID VALIDITY

14.1 Bids shall remain valid for 90 days from the date of its opening. A bid valid for a shorter period shall be treated as non-responsive and rejected.

14.2 The Procuring Agency shall ordinarily be under an obligation to process and evaluate the bids within the stipulated bid validity period. However, for any reasons to be recorded in writing, if an extension is considered necessary, all those who have submitted their bids shall be asked to extend their respective bid validity period.

15. ALTERNATIVE BIDS

15.1 If any bidder elects to submit alternative proposal(s), complete information on the alternative items including all data relating to technical specifications shall be given as per following table.

Sr. No.	Description of Stores	Statement of Variation from Specifications	Reasons for Variations

5. SUBMISSION OF BIDS

16. SEALING AND MARKING OF BIDS

16.1 The envelopes shall:

- (a) bear the name and address of the Bidder;
- (b) bear the specific identification Name and Number of this bidding process indicated in the Bid Data Sheet; and
- (c) bear the Procuring Agency's name and address i.e. Dow University of Health Sciences (Ojha Campus), Procurement Directorate, Prof. Masood Hameed Khan Library Building, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi and a statement: "DO NOT OPEN BEFORE," the time and date specified in the Bid Data Sheet.

16.2 If all envelopes are not sealed and marked as required, the Procuring Agency will assume no responsibility for the misplacement or premature opening of the bid.

17. DEADLINE FOR SUBMISSION OF BIDS

17.1 Bids must be submitted by the bidders and received by the Procuring Agency at the specified address not later than the time and date specified in the Bid Data Sheet.

17.2 The Procuring Agency may, at its convenience, extend this deadline for submission of bids by amending the bidding documents in which case all rights and obligations of the Procuring Agency and the Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18. LATE BID

18.1 Any bid received by the Procuring Agency after the deadline for submission of bids prescribed by the Procuring Agency shall not be entertained and returned unopened to the bidder.

19. WITHDRAWAL OF BIDS

19.1 The Bidder may after its submission withdraw prior to the expiry of the deadline prescribed for submission of bids.

6. OPENING AND EVALUATION OF BIDS

20. OPENING OF BIDS BY THE PROCURING AGENCY

22.1 The Procuring Agency will open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register evidencing their attendance.

22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Procuring Agency, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the Bidder pursuant to ITB Clause 18.

22.3 Bids (and modifications sent pursuant to ITB Clause 19) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the bidders.

21. CLARIFICATION OF BIDS

21.1 During evaluation of the bids, the Procuring Agency may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

22. PRELIMINARY EXAMINATION

22.1 The Procuring Agency will examine the bids to determine whether they are complete, whether any computational errors have been made, whether

required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.

- 22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 22.3 The Procuring Agency may waive any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.
- 22.4 Prior to the detailed evaluation, pursuant to ITB Clause 23 the Procuring Agency will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, such as those concerning Bid Security, Applicable Law, and Taxes and Duties, will be deemed to be a material deviation. The Procuring Agency's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 22.5 If a bid is not substantially responsive, it will be rejected by the Procuring Agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

23. EVALUATION AND COMPARISON OF BIDS

- 23.1 The Procuring Agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 22.
- 23.2 The Procuring Agency's evaluation of a bid will be on delivered duty paid (DDP) inclusive of prevailing duties/taxes and C&F / CNF basis and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 23.3 The Procuring Agency's evaluation of a bid will take into account, in addition to the bid price quoted, one or more of the following factors, and quantified in ITB Clause 24:
 - (a) **Incidental costs**
Incidental costs provided by the bidder will be added by Procuring Agency to the bid price at the final destination.
 - (b) **Delivery schedule offered in the bid**
The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement.

- (c) **Deviations in payment schedule from that specified in the Special Conditions of Contract**
Bidders shall state their bid price for the payment schedule outlined in the SCC. Bids will be evaluated on the basis of this base price. Bidders are, however, permitted to state an alternative payment schedule and indicate the reduction in bid price they wish to offer for such alternative payment schedule. The Procuring Agency may consider the alternative payment schedule offered by the selected Bidder.
- (d) **Cost of components, mandatory spare parts, and service**
The Procuring Agency will estimate the cost of spare parts usage in the initial period of operation, based on information furnished by each Bidder, as well as on past experience of the Procuring Agency or other procuring agencies in similar situations. Such costs shall be added to the bid price for evaluation.
- (e) **Availability of spare parts and after sales services for the equipment offered in the bid**
The cost to the Procuring Agency of establishing the minimum service facilities and parts inventories, as outlined in the Bid Data Sheet or elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.
- (f) **Projected operating and maintenance costs during the life of the equipment;**
Since the operating and maintenance costs of the goods under procurement form a major part of the life cycle cost of the equipment, these costs will be evaluated in accordance with the criteria specified in the Bid Data Sheet or in the Technical Specifications.
- (g) **Performance and productivity of the equipment offered**
Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below the norm of 100, an adjustment for an amount will be added to the bid price, representing the capitalized cost of additional operating costs over the life of the plant, using the methodology specified in the Bid Data Sheet or in the Technical Specifications.

24. EVALUATION / QUALIFICATION CRITERIA

24.1 Merit Point System:

The following merit point system for weighing evaluation factors/criteria will be applied for technical proposals.

A. PRODUCT EVALUATION

S#	PARAMETERS	SUB-PARAMETERS	Total Marks
1	Conformity to the Purchaser's Specifications		25
		Fully compliant with the required specifications	25
		Compliant with minor deviation (up to 10% subject to main function is not effected)	20
2	Product Certification		15
		Food and Drug Administration (FDA) 510K and European Community (CE) MDD or Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO)	15
		European Community (CE) MDD and Japan Industrial Standard (JIS) / Japan Quality Assurance Organization (JQAO)	12
		Food and Drug Administration (FDA) 510K	10
		European Community (CE) MDD	08
		Japan Industrial Standard (JIS)/Japan Quality Assurance Organization (JQAO)	08
TOTAL MARKS PRODUCT EVALUATION (A)			40

B. BIDDER EVALUATION

S#	PARAMETERS	SUB-PARAMETERS	Total Marks
3	Legal Requirement		17
		Manufacturer Authorization	5
		Price Schedule (without prices)	4
		Bid Form (without prices)	4
		Tender Purchase Receipt	2
		Taxation Certificate (NTN and GST)	2
4	Technical Staff		13
		Simple Technician (minimum two)	2
		Diploma Engineers (minimum two)	3
		Graduate Engineers (For High Tech / Critical equipment Graduate Engineer of relevant field is mandatory for each product) (minimum two)	5
		MSc / PhD qualification/Foreign training	3

S#	PARAMETERS	SUB-PARAMETERS	Total Marks
5	Networking and Training		8
		Networking setup across Pakistan (1 mark for each setup upto maximum 6)	6
		Certificate to the affect that the firm will provide training in the use of equipment to the relevant technical staff. Training plan must be attached with certificate	2
6	Delivery		6
		4 to 6 Weeks or earlier	6
		7 to 12 Weeks or earlier	2
7	Past Experience / Performance		4
		Satisfactory performance certificate for the quoted equipment from the medical institutions within Pakistan (1 mark for each certificate upto maximum 4)	4
8	Financial Status		6
		Bank Certificate	2
		Last year verified Balance Sheet / Income Tax Return Forms	2
		Yearly turn-over of over 50 Million	2
9	Bonus points		6
		Warranty period extension free of cost (the firm offered greater period will get the marks)	2
		Comparative Running Cost (consumables / reagents / replacement parts)	2
		Post warranty maintenance contract, including service and parts, rates (companies to offer percentage (%) of the contract value in the technical bid. The lowest will get the full marks)	2
TOTAL BIDDER EVALUATION (B)			60
GRAND TOTAL (A + B)			100

Note:

- If a bidder fails to obtain minimum 20 marks, against the criteria “**Conformity to the Purchaser’s Specifications**” and **unable to provide valid manufacture Authorization** his offer will not be considered for further evaluation and rejected.
- Bidders achieving minimum 70 marks will be considered only for further process.

- 24.2 **Litigation History**
The Bidder should not be involved in any litigation with the Procuring Agency/Govt. Deptt: (Provincial/Federal), else their bid will be rejected.

25. **CONTACTING THE PROCURING AGENCY**

- 25.1 No bidder shall contact the Procuring Agency on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If any bidder wishes to bring additional information to the notice of the Procuring Agency, it may do so in writing.
- 25.2 Any direct or indirect effort by a bidding firm to influence the Procuring Agency during the process of selection of a bidder or award of contract may besides rejection of its bid result into its disqualification from participation in the Procuring Agency's future bids.

26. **REJECTION OF BIDS**

- 26.1 Notwithstanding anything stated here-before after the Procuring Agency may reject any or all bids at any time prior to the acceptance of a bid. The Procuring Agency may upon request, communicate to a bidder, the grounds for its rejection, but shall not be under obligation to justify those grounds.

27. **RE-BIDDING**

- 27.1 If the Procuring Agency has rejected all bids, it may move for a re-bidding or may seek any alternative method of procurement under the provisions of the prevailing Rules.

28. **ANNOUNCEMENT OF EVALUATION REPORT**

- 28.1 The Procuring Agency will announce the Evaluation Report and the resultant acceptance or rejection of bids at least seven days prior to the award of procurement contract.

7. AWARD OF CONTRACT

29. **ACCEPTANCE OF BID AND AWARD CRITERIA**

- 29.1 The bidder with lowest evaluated bid under clause 22, 23 & 24, if not in conflict with any other law, rules, regulations or policy of the Government, will be awarded the contract within the original or extended period of bid validity.

30. **PROCURING AGENCY'S RIGHT TO VARY QUANTITIES**

- 30.1 The Procuring Agency reserves the right to increase or decrease the quantity of stores originally specified in the Price Schedule and Schedule of Requirements without any change in unit price or other terms and conditions.

31. LIMITATIONS ON NEGOTIATIONS

- 31.1 The Procuring Agency reserves the right to hold negotiation of rates, delivery schedule or completion schedule for all the items or any item.
- 31.2 Negotiations will not be used to change substantially:
- i. the technical quality or details of the requirement, including the tasks or responsibilities of the bidder or the performance of the goods;
 - ii. the terms and conditions of the Contract and;
 - iii. anything affecting the crucial or deciding factors in the evaluation of the proposals / bid and / or selection of successful bidder..

32. NOTIFICATION OF AWARD

- 32.1 Prior to the expiry of the original or extended period of bid validity, the successful bidder will be informed in writing of acceptance of its bid by the Procuring Agency.

33. SIGNING OF CONTRACT

- 33.1 While conveying acceptance of bid to the successful bidder, the Procuring Agency will send the bidder Contract Form provided in the bidding documents, incorporating all points of agreement between the Parties.
- 33.2 Ten days after the official announcement of the award, both the successful Bidder and the Procuring Agency will sign and date the Contract on legal stamp paper valuing 0.35% of the value of contract, (cost shall be borne by the bidder). In case the successful Bidder, after completion of all codal formalities, shows inability to sign the Contract, its Bid Security shall be forfeited. The firm may also be blacklisted from taking part in any future bidding of Procuring Agency for a period upto five Years. In such a situation, the Procuring Agency may make the award to the next lowest evaluated responsive bidder or move for re-bid.

34. PERFORMANCE SECURITY

- 34.1 The successful Bidder shall furnish Performance Security. Upon submission of Performance Security the Bid Security will be returned to the Bidder. The amount of Performance Security is specified at Bid Data Sheet.
- 34.2 Failure of the successful Bidder to comply with any of the requirements specified in this document shall be considered as sufficient grounds for the annulment of the award and forfeiture of the Bid Security, in which event the Procuring Agency may make the award to the next lowest evaluated Bidder at the risk and cost of the former.

35. CORRUPT OR FRAUDULENT PRACTICES

- 35.1 (a) the Procuring Agency and the Bidders / Manufacturers / Contractors are expected to observe the highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, the relevant terms / phrases as may apply are defined below:
- (i) "corrupt practice" means the offering, giving, receiving or soliciting of any thing of value to influence the action of a public official in the procurement process or in Contract execution; and
 - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a Contract to the detriment of the Procuring Agency, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non competitive levels and to deprive the Procuring Agency of the benefits of free and open competition;
- (b) the Procuring Agency will take all possible administrative / legal measures if it is found that the Bidder recommended for award was / is engaged in corrupt or fraudulent practice(s) before or after signing of the contract resulting into the conviction of the proprietor under criminal case besides blacklisting of the firm either indefinitely or for such period of time as may be determined by the Procuring Agency.
- (c) will declare a firm ineligible, either indefinitely or for a stated period of time, for the award of a Contract if it, at any time, determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing a Contract.

B: General Conditions of Contract (GCC)

1. DEFINITIONS

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Procuring Agency and the Bidder, as recorded in the Contract Form signed by the Parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) "The Contract Price" means the price payable to the Bidder under the Contract for the full and proper performance of its Contractual obligations.
- (c) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Procuring Agency under the Contract.
- (d) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance, printing of special instructions on the label and packing, design and logo of the Procuring Agency, transportation of goods up to the desired destinations and other such obligations of the Bidder covered under the Contract.
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Procuring Agency" means the Dow University of Health Sciences, Karachi.
- (h) "The Bidder" means the individual or firm supplying the goods under this Contract.
- (i) "Day" means official working day excluding national holidays.

2. APPLICATION

2.1 These General Conditions shall apply to the extent that they are not inconsistent with provisions of other parts of the Contract.

3. STANDARDS

3.1 The goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications goods eligibility criteria.

4. USE OF CONTRACT DOCUMENTS AND INFORMATION

4.1 The Bidder shall not without the Procuring Agency's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern; sample, or information furnished by or on behalf of the Procuring Agency in connection therewith, to any person other than a person employed by the Bidder in the performance of the Contract. Disclosure to such employed person shall be made in confidence and shall extend only, as far as may be necessary, to such performance and not further or otherwise.

4.2 Any document, other than the Contract itself, shall remain the property of the Procuring Agency and shall be returned (all copies) on completion of the Bidder's performance under the Contract.

4.3 The Bidder shall permit the Procuring Agency to inspect the Bidder's accounts and records relating to the performance of the Supplies.

5. PATENT RIGHTS

5.1 The Bidder shall indemnify the Procuring Agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the country.

6. ENSURING STORAGE ARRANGEMENTS

6.1 To ensure storage arrangements for the intended supplies, the Bidder shall inform the Procuring Agency at least two weeks prior to the arrival of the consignments at its store/warehouse. However, in case no space is available at its store/warehouse at the time of supply, the Procuring Agency shall, seven days prior to such a situation, inform the Bidder, in writing, of the possible time-frame of availability of space by which the supplies could be made. In case the Bidder abides by the given time frame, he will not be penalized for delay.

7. INSPECTIONS, TESTS AND TRAINING

7.1 The Procuring Agency or its representative shall have the right to inspect and/or test the goods to confirm their conformity to the Contract specifications at the cost payable by the Bidder.

7.2 The Procuring Agency's right to inspect, test and, where necessary, reject the goods either at Bidder's premises or upon arrival at Procuring Agency's destinations shall in no way be limited or waived by reasons of the goods having previously been inspected, tested, and approved by the Procuring

Agency or its representative prior to the goods shipment from the manufacturing point.

- 7.3 Any specialized training required for the smooth operation of the goods shall be the responsibility of the Bidder.

8. DELIVERY AND DOCUMENTS

- 8.1 The Bidder shall in accordance with the terms specified in the Schedule of Requirements make delivery of the goods. Details of documents to be furnished by the Bidder are specified in SCC.

9. INSURANCE

- 9.1 The goods supplied under the Contract shall be delivered to the Procuring Agency after the payment of all taxes and customs duty, cess, octroi charges etc. Risk will be transferred to the Procuring Agency only after the delivery of these goods has been made to the Procuring Agency. Hence, payment of insurance premium, if any, shall be the responsibility of the Bidder.

10. TRANSPORTATION

- 10.1 The Bidder shall arrange such transportation of the goods as is required to prevent them from damage or deterioration during transit to their final destination as indicated in the Schedule of Requirements.
- 10.2 The goods shall be supplied on "**D.D.P**" basis at the Dow University of Health Sciences, Karachi AND / OR "**CFR / C&F**" Basis at Karachi Port as per Schedule of Requirements on the risk and cost of the Bidder. Transportation including loading/unloading of goods shall be the responsibility of Bidder.

11. INCIDENTAL SERVICES

- 11.1 The Bidder will be required to provide to the Procuring Agency incidental services the cost of which should be included in the total bid price.

12. WARRANTY / GUARANTEE

- 12.1 The term period of warranty / guarantee mean the period of twelve (**12**) **months** form the date on which the Stores have been put into operation and demonstrated to the University staff. In any case this period shall not exceed eighteen (18) months from the date of taking-over certificate.
- 12.2 During the period of warranty / guarantee, the Contractor shall remedy, at his / her expense, all defects in design, materials, and workmanship that may develop or are revealed under normal use of the goods upon receiving written notice from the University; the notice shall indicate in what respect the goods are faulty.

- 12.3 The provisions of this Clause include all the expenses that the Contractor may have to incur for delivery and installation of such replacement parts, material and equipment as are needed for satisfactory operation of the goods at the University premises.
- 12.4 The contractor shall provide warranty / guarantee for supply of kits and chemicals, consumables, films etc. for at least 05 years (where applicable).
- 12.5 The contractor shall remain responsible for providing after sale services even after expiry of warranty / guarantee period and sign a Service Contract including Parts with Procuring Agency for 05 years (minimum). **Bidder shall separately quote the price of service contract inclusive of parts.**
- 12.6 In case of consumable items, kits, chemicals, films etc. the contractor shall remain responsible for specificity, efficacy & sensitivity with maximum period of expiry as much allowed by manufacturer.
- 12.7 The Procuring Agency shall promptly notify the Bidder in writing of any claims arising out of this warranty.

13. PAYMENT

- 13.1 The method and conditions of payment to be made to the Bidder under this Contract are specified in SCC.

14. ASSIGNMENT

- 14.1 The Bidder shall not assign, in whole or in part, its obligations to perform to another party under this Contract, except with the Procuring Agency's prior written consent.

15. DELAYS IN THE BIDDER'S PERFORMANCE

- 15.1 Delivery of the goods shall be made by the Bidder in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements / Contract Award.
- 15.2 If at any time in the course of performance of the Contract, the Bidder encounters anything impeding timely delivery of the goods, he shall promptly notify the Procuring Agency in writing of the causes of delay and its likely duration. As soon as practicable, after receipt of the Bidder's notice, the Procuring Agency shall evaluate the situation and may, depending on merits of the situation, extend the Bidder's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the Parties by a supplementary Contract to be treated as an addendum to the original contract.
- 15.3 Any undue delay by the Bidder in the performance of its delivery obligations shall render it liable to the imposition of liquidated damages.

16. PENALTIES LIQUIDATED DAMAGES

16.1 In case of late delivery, even for reasons beyond control, penalty as specified in SCC will be imposed upon the Bidder / Manufacturer. The Procuring Agency may consider termination of the Contract in case there is an unusual delay in the delivery of the goods whereby the ongoing activity is likely to be affected seriously.

17. TERMINATION FOR DEFAULT

17.1 The Procuring Agency may, without prejudice to any other remedy for breach of Contract, by a written notice of default sent to the Bidder, terminate this Contract in whole or in part if:

- (a) the Bidder fails to deliver any or all installments of the goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency;
- (b) the Bidder fails to perform any other obligation(s) under the Contract to the satisfaction of the Procuring Agency; and
- (c) the Bidder, in the judgment of the Procuring Agency, has engaged itself in corrupt or fraudulent practices before or after executing the Contract.

18. FORCE MAJEURE

18.1 The Bidder shall not be liable for forfeiture of its Performance Guaranty/ Bid Security, or termination / blacklisting for default if and to the extent that this delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure. For the purposes of this Clause Force Majeure means an act of God or an event beyond the control of the Bidder and not involving the Bidder's fault or negligence directly or indirectly purporting to mal-planning, mismanagement and /or lack of foresight to handle the situation. Such events may include but are not restricted to acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, earthquakes, strikes, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Bidder shall promptly notify the Procuring Agency in writing with sufficient and valid evidence of such condition and the cause thereof. The Committee, constituted for redressing grievances, will examine the pros and cons of the case and all reasonable alternative means for completion of purchase order under the Contract and will submit its recommendations to the competent authority. However, unless otherwise directed by the Procuring Agency in writing, the Bidder shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek reasonable' alternative means for performance not prevented by the Force Majeure event.

19. TERMINATION FOR INSOLVENCY

19.1 The Procuring Agency may at any time terminate the Contract by giving written notice of one month time to the Bidder if the Bidder becomes bankrupt or otherwise insolvent. In that event, termination will be without compensation

to the Bidder, provided that such termination will not prejudice or affect any right or remedy which has accrued or will accrue thereafter to the Parties.

20. ARBITRATION AND RESOLUTION OF DISPUTES

20.1 The Procuring Agency and the Bidder shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the Contract.

20.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Agency and the Bidder have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred to the Arbitrator for resolution through arbitration.

20.3 In case of any dispute concerning the interpretation and/or application of this Contract is to be settled through arbitration, the arbitrator to be appointed with the approval of the University's Syndicate. The decisions taken and/or award given by the sole arbitrator shall be final and binding on the Parties.

21. PACKING

21.1 The Bidder shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

21.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring Agency.

22. GOVERNING LANGUAGE

22.1 The Contract shall be written in English language. All correspondence and other documents pertaining to the Contract, which are exchanged by the Parties, shall be written in English.

23. APPLICABLE LAW

23.1 This Contract shall be governed by the laws of Pakistan and the courts of Karachi - Pakistan shall have exclusive jurisdiction.

C: NOTICE INVITING TENDER (NIT)

No. DUHS/DP/2017/ 26 Dated 21 September 2017

Bids are invited under sealed cover for the **Procurement of Hospital Equipment / Instruments** on DDP / C&F basis from authorized Dealers / Distributors / Manufacturers, having registration with Federal Board of Revenue (FBR) for Income Tax and Sales Tax.

Tender Fee	Rs. 2,000/- (Rupees two thousand only) Non-Refundable in shape of Pay Order / Demand Draft in favor of Dow University of Health Sciences, Karachi
Bidding Procedure	Single Stage – Two Envelope
Bid Security	2% of the total bid value.
Purchasing Date & Time	25 September 2017 to 10 October 2017
Bids Delivery Date & Time	11 October 2017 at 11:00 a.m.
Bid Opening Date & Time	11 October 2017 at 11:30 a.m. In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening, bids shall be submitted / opened on next working day at the given time.

Bidding document may be purchased by interested bidders on the submission of a written application, NTN, GST Certificates and Pay Order / Demand Draft of tender fee during office hours. Bidding Documents are also available at DUHS and SPPRA websites. Interested Bidders may obtain further information personally from 11:00 A.M. to 02:00 P.M.

Conditional Bids, Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, bids received after specific date and time and bids of Black Listed firms will be rejected.

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPP Rules 2010 (Amended 2013).

Director Procurement
Dow University of Health Sciences (Ojha Campus)
Procurement Directorate at Library Block,
SUPARCO Road, off Main University Road,
Gulzar-e-Hijri, Scheme No. 33, Karachi.
Phone No. + 92-21-99261497
Email: director.procurement@duhs.edu.pk

D: Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

INTRODUCTION

ITB 1.1 Name of Procuring Agency: Dow University of Health Sciences, Karachi.

ITB 1.1 Name of Contract:
Procurement of Hospital Equipment / Instruments.

THE BIDDING PROCEDURE

ITB 4.1 Bids shall be accepted under the **Single Stage - Two Envelope Procedure**.

PREPARATION OF BIDS

ITB 7.1 Language of the bid shall be English

ITB 9.6 **For the Goods offered within the Procuring Agency's Country:** the price quoted shall be on **delivered duty paid (DDP) Basis** at Consignee's End.

For the Goods offered from Outside the Procuring Agency's Country: the price quoted shall be on **CFR / C&F Karachi Basis**.

ITB 10.1 **For the Goods offered within the Procuring Agency's Country:** the price quoted shall be in **Pak Rupees**.

ITB 10.2 **For the Goods offered from Outside the Procuring Agency's Country:** the price quoted shall be in **Foreign Currency**.

ITB 13.1 The Bid Security shall not be less than **2%** of the total Bid price in Pak Rupees.

ITB 14.1 Bid validity period shall be **90 days**.

ITB 15.1 If any bidder elects to submit alternative proposal(s), complete information on the alternative items including all data relating to technical specifications shall be provided.

SUBMISSION OF BIDS

ITB 16.1 (b) The identification of this bidding process is:
Procurement of Hospital Equipment / Instruments.
No. DUHS/DP/2017/ 26 Dated 21 September 2017

ITB 16.1 (c) Dow University of Health Sciences (Ojha Campus), Procurement Directorate at Library Block, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi.

“Must bear the name of the bidder” and a warning “Do Not Opened Before the time and date of bid opening”.

ITB 17.1 Deadline for bid submission: 11 October 2017 at 11:00 a.m.

OPENING & EVALUATION OF BIDS

ITB 20.1 The bid opening shall take place at:
Dow University of Health Sciences (Ojha Campus), Procurement Directorate at Library Block, SUPARCO Road, off Main University Road, Gulzar-e-Hijri, Scheme No. 33, Karachi.

Date: **11 October 2017**

Time: **11:30 a.m.**

CONTRACT AWARD

ITB 31.1 Qty. could be increased or decreased during the contract period (including extended period) according to the actual requirement.

ITB 34.1 The successful Bidder shall furnish the Performance Security equivalent to 5% of the total Contract amount from any scheduled banks in shape of Pay Order / Demand Draft / Call Deposit / Bank Guarantee. The Performance Guarantee/Security Form is provided in the bidding documents. Upon submission of Performance Security / Guarantee the Bid Security would be returned to the Bidder.

E: Special Conditions of Contract (SCC)

1. DEFINITIONS (GCC CLAUSE 1)

GCC 1.1 (g) The Procuring Agency is the Dow University of Health Sciences, Karachi.

GCC 1.1 (h) The Bidder is: _____
(name and address of the successful bidder)

2. BID SECURITY (ITB CLAUSE 13)

ITB 13.1 The Bidder shall furnish, as part of its financial proposal/bid, refundable Bid Security in Pak Rupees @ 2% of the total bid value In the shape of Bank Draft / Pay Order / Call Deposit / Bank Guarantee in the name of the Dow University of Health Sciences, Karachi. The financial bid found deficient of the Bid Security will be rejected. No personal cheque in lieu thereof will be acceptable at any cost. The previous Bid Security, if any, will not be considered or carried forward. However, the Bid Security of the successful Bidder will be returned upon submission of Performance Security equal to 5% of the Contract amount that will remain with the Dow University of Health Sciences, Karachi till satisfactory completion of the Contract period. After delivery and acceptance of the Goods, the performance security shall be reduced to two (2) percent of the Contract Price to cover the Supplier's warranty obligations

3. INSPECTIONS, TESTS AND TRAINING (GCC CLAUSE 7)

GCC 7.1, 7.2 & 7.3 The goods received in the Dow University of Health Services, Karachi from the Bidder will be thoroughly inspected and examine by a Committee to make sure that the goods received conform to the specifications laid down in the bid documents and which have been approved by the Procurement Committee for procurement. The Committee will submit its inspection report, any deficiency pointed out by the Committee shall have to be rectified by the Bidder free of cost. The Bidder will be responsible to provide the Foreign and or Local Training to the University Staff for the specialized Equipment.

4. DELIVERY AND DOCUMENTS (GCC CLAUSE 8)

GCC Clause 8.1 *(a) For Goods from within the Procuring Agency's country:*

The Bidder shall provide the following documents at the time of delivery of goods to the Store / Warehouse of the Dow University of Health Sciences, Karachi for verification duly completed in all respects:

- i. Original copies of Delivery Note (Delivery Challan) (in duplicate) showing item's description, make, model, quantity as well as Lot Number, Batch Number, Registration Number, manufacturing and expiry dates (if applicable).
- ii. Original copies of the Bidder's invoices (in duplicate) showing warranty, item's description, make, model as well as Lot Number, Batch Number, Registration Number, manufacturing and expiry dates (if applicable) per unit cost, and total amount.
- iii. Original copies of the Sales Tax Invoices (where applicable) in duplicate showing item's description, quantity, per unit cost (without GST), amount of GST and total amount (with GST).
- iv. Manufacturer's or Bidder's warranty certificate.
- v. Inspection certificate issued by the nominated inspection committee along with Bidder's factory inspection report.
- vi. Certificate of origin.

(b) For Goods supplied from abroad as per INCOTERM CFR / C&F Karachi:

Details of shipping and documents to be furnished by the Bidder shall be:

Upon shipment, the Bidder shall notify the Procuring Agency and the Insurance Company by telex or fax or email the full details of the shipment, including Contract number, description of Goods, quantity, the vessel / flight, the Bill of Lading / Air Way Bill number and date, port of loading, date of shipment, port of discharge, etc. The Bidder shall send the following documents to the Procuring Agency, with a copy to the Insurance Company:

- i. 04 copies of the Bidder's invoice showing the description of the Goods, quantity, unit price, and total amount.
- ii. Original and 04 copies of the negotiable, clean, on-board bill of lading / air way bill marked "freight prepaid" and 04 copies of non-negotiable bill of lading / air way bill.
- iii. 04 copies of the packing list identifying contents of each package.
- iv. Insurance certificate.
- v. Manufacturer's or Bidder's warranty certificate.
- v. Inspection certificate, issued by the nominated inspection agency along with Bidder's factory inspection report.
- vi. Certificate of origin.

The Procuring Agency shall receive the above documents at least one week before arrival of the Goods at the port or place of arrival and, if

not received, the Bidder will be responsible for any consequent expenses.

5. INSURANCE (GCC CLAUSE 9)

GCC 9.1 The goods supplied under the Contract shall be on DDP / CFR / C&F basis at consignee's end under which risk will be transferred to the Procuring Agency only after it has taken delivery of the goods. Hence insurance coverage is Bidder's responsibility.

6. WARRANTY / GUARANTEE (GCC CLAUSE 12)

GCC 12.1 The goods shall be accompanied by manufacturer standard warranty / guarantee or 1 year, whichever is more.

GCC 12.2 The Procuring Agency shall promptly notify the Bidder in writing of any claims arising out of this warranty.

GCC 12.5 **The bidder shall separately quote the price of service contract inclusive of parts for 5 years (minimum) in term of %age for total contract value.**

7. PAYMENT (GCC CLAUSE 13)

GCC 13.1 The method and conditions of payment to be made to the Bidder under this Contract shall be as follows:

i. For Goods supplied from within the Procuring Agency's country:

- (a) Payment shall be made in Pak Rupees.
- (b) The payment will be made to the Bidder within 30 days of the receipt of original delivery challan(s) and invoice(s) in duplicate duly completed in all respect and signed and stamped by the Chairman of the Inspection Committee. The Inspection Committee will prepare and submit a report of physical inspection with a certificate to the effect that the goods conform to the specifications laid down in the bidding documents.

OR

ii. For Goods supplied from outside the Procuring Agency's country:

- (a) The Procuring Agency shall pay the Bidder or its Principal through irrevocable letter of credit opened in favor of the Bidder or Its Principal in a bank in its country, upon submission of all the requisite documents.
- (b) Bidder will bear all the additional bank charges inside and outside the Procuring Agency country on account of Confirmation of L/C, if he desire to establish a Confirmed L/C etc.

OR

iii. For Goods supplied from outside the Procuring Agency's country:

- (a) The Procuring Agency shall pay the Bidder or its Principal through **3 years deferred payment** by irrevocable letter of credit opened in favor

of the Bidder or Its Principal in a bank in its country, upon submission of all the requisite documents.

- (b) Bidder will bear all the additional bank charges inside and outside the Procuring Agency country on account of Confirmation of L/C, if he desire to establish a Confirmed L/C etc.

8. PENALTIES/ LIQUIDATED DAMAGES (GCC CLAUSE 16)

GCC 16.1 In case deliveries are not completed within the time frame specified in the schedule of requirements / contract, a Show Cause Notice will be served on the Bidder which will be following by cancellation of the Contract to the extent of non-delivered portion of installments. No supplies will be accepted and the amount of Performance Guarantee / Security to the extent of non-delivered portion of supplies of relevant installments will be forfeited. If the firm fails to supply the whole installments, the entire amount of Performance Guarantee/Security will be forfeited to the Government Account and the firm will be blacklisted at least for two years for future participation in bids:

The liquidated damage shall be 0.5 % per week or part thereof. The maximum amount of liquidated damages shall be 10% of the amount of contract. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of the contract, the Procuring Agency shall rescind the contract, without prejudice to other courses of action and remedies open to it.

9. "ARBITRATION" AND RESOLUTION OF DISPUTES (GCC CLAUSE 20)

GCC 20.3 Dispute resolution mechanism to be applied shall be as follows:

In case of any dispute concerning the interpretation and/or application of this Contract is to be settled through arbitration, the arbitrator to be appointed with the approval of the University's Syndicate. The decisions taken and/or award given by the sole arbitrator shall be final and binding on the Parties

10. PACKING (GCC CLAUSE 21)

GCC 21.1 The packing, marking and documentation within and outside the packages shall be as per manufacturer standards meeting the safety requirements of the goods.

12. GOVERNING LANGUAGE (GCC CLAUSE 22)

GCC 22.1 The language of this Contract shall be English.

11. APPLICABLE LAWS (GCC CLAUSE 23)

GCC 23.1 The Contract shall be governed by the Laws of Pakistan and the Courts of Pakistan shall have exclusive jurisdiction.

12. NOTICES

Procuring Agency's address for notice purposes:

Director Procurement
Dow University of Health Sciences (Ojha Campus)
Procurement Directorate at Library Block,
SUPARCO Road, off Main University Road,
Gulzar-e-Hijri, Scheme No. 33, Karachi.
Phone No. + 92-21-99261497
Email: director.procurement@duhs.edu.pk

Bidder's address for notice purposes:

Name of Bidder: _____

Name of Contact Person & Designation: _____

Phone No. _____

Fax No. _____

Mobile Phone No. _____

Email Address _____

F: Schedule of Requirements

1. SCHEDULE OF REQUIREMENTS

1.1 For Goods supplied from within the Procuring Agency's country (DDP Basis)

- i) The entire quantity of the ordered goods shall be delivered within **30 days** or earlier from the date of issuance of supply order / contract award.
- ii) The delivery period shall start from the date of contract signature.

1.2 For Goods supplied from outside the Procuring Agency's country (C&F / CFR / CNF / CPT Basis):

- i. The shipment of the items of Stores which are to be imported shall be started as early as possible (**preferable within 45 days**); the shipment schedule shall be submitted along with the offer, and shall be negotiable and subject to approval by the University.
- ii. The bidder must indicate in his offer the port **from where** the Stores will be **shipped**.
- iii. The delivery period shall start from the date of opening of letter of credit.

G: Technical Specifications

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
01.	<p>DIALYZER PREPROCESSORS</p> <ul style="list-style-type: none"> • Feed Flow Requirement not more than 2 to 4 liters/minute • Pressure requirement between 25 to 50 PSI • Dialyzer Reprocessing Capability for all type of Dialyzers • Process: Automatic Cleaning, Volume Measuring, Leak Testing and Chemical Filling • System should be capable for the reprocessing of all type of dialyzers • Automatic Calibration of TCV • TCV alarm threshold 	01 No.
02.	<p>DIALYSIS BEDS</p> <ul style="list-style-type: none"> • Minimum Load 240 Kgs. • Total length not less than 1920mm • Total width not less than 700mm • CPR Function • Digital Weighing System range 0-240 kg to monitor the patient weight change, UF continuously. • Electronically controlled Backrest, Seat-rest, Leg-rest and Height adjustment • Adjustable Footrest • Tendelendburg position • Side Rails protection with UP/DOWN position by push button • Standard I.V Pole • Food Tray / Table • Covering for protecting the chair not corrosion, waterproof, dustproof, easy to clean & disinfect and maintain. • Upholstery with polyurethane, luxurious, comfortable and durable. • Lockable Casters 	07 Nos.
03.	<p>PATIENT MONITOR (Adult, Pediatrics & Neonatal) With ECG/SPO2 /NIBP/RESP and TEMP Complete with All Standard Accessories</p> <ul style="list-style-type: none"> • ECG • NIBP • SpO2 • Respiration • Temperature • Color TFT touch screen display size: 15” Or better. • Manual/Automatic/Continuous measurement of NIBP • Applications from Neonate to Adult • 3/5/ 12-lead ECG waveform synchronously displays high precision ECG measurement technology, assisting in precise diagnosis of patients. • Intelligent alarm management allows auto identification of alarm level and self-adjusts proper alarm time to reduce false alarms. 	50 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> • Rechargeable Lithium Ion battery allows for over 4 hours of continuous working time. • 2 x IBP, Cardiac Output and ETCO2 (module should be quoted separately). • Accessories for Pediatrics & Neonatal would be quoted separately • Should have FDA with 510K certificate 	
04.	<p>VITAL SIGN MONITOR PORTABLE (BP, SP02, PULSE, MAP)</p> <ul style="list-style-type: none"> • Mains and battery operated SPOT check vital signs monitor • NIBP (Non-invasive blood pressure) for all patient groups, Adult, supplied standard with NIBP hose, 1 x Std. Adult Cuff • TFT Display size: 6” Or better. • Massimo SpO2 technology, pulse rate with perfusion Index, supplied with interface cable and Massimo Adult Finger Sensor • Power cord • Long life integrated battery 	09 Nos.
05.	<p>SPIROMETER</p> <ul style="list-style-type: none"> • Test types: Single breath tests, flow/volume loops, multi-breath testing, tidal breathing • Selectable Spirometry predicted values. • Color Touch Screen 6” or better • Autocalveable Flow Head • Flow Detection by Fleisch type pneumotachograph • Over 50 Test Parameters • Back Pressure Should be Less than 0.1kPa/L/second @ 14L/s, complies with ATS/ERS 2005 • Pre-post Spirometry comparison for bronchodilator or longer-acting treatments • Could be connected directly to A4 Size Printer • Back Pressure Should be Less than 0.1kPa/L/second @ 14L/s, complies with ATS/ERS 2005 • Must be CE Marked or FDA Approved 	02 No.
06.	<p>PHARMACEUTICAL REFRIGERATOR</p> <p>Cooling system. Forced – Air Circulation, Temperature control. Safety Control System</p> <p>Ergonomic design Liters 840 – 940 or better. Input Power 900W. Temperature range: 2 ~ 8°C (Ambient 10°C ~ 32°C) Voltage (V/Hz) .220V / 50 Hz.</p> <p>Temperature Control Microprocessor control. Over and under temperature Audible and visual alarm</p> <p>Cabinet Upright. Door Double-layer glass. Casters 3-4. Door Lock</p> <p>Shelves / Box 10-12.</p>	14 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
07.	<p>SYRINGE PUMP</p> <p>To control the administration of intravenous fluids in very small amounts and at a carefully regulated rate over long periods.</p> <p>Maximum flow up to 1200 ml / h</p> <p>Expanded number of application e.g. supplementary feeding, blood transfusions, chemotherapy and infusion of therapeutic drugs</p> <p>Compatible with a wide make of syringes</p> <p>Plunge monitor</p> <p>Pressure alarm for detection of occlusion</p> <p>Computer Integration system</p> <p>Electromagnetic compatibility</p> <p>Safety mechanisms (Power switch)</p> <p>Replaceable battery</p> <p>7 special functions including operation reminder, auto-power off, alarm repeat, buzzer setting, power source witch alarm, history function and key lock function</p> <p>Syringe Sizes in ml: 10, 20, 30, 50</p>	10 Nos.
08.	<p>INFUSION PUMPS</p> <ul style="list-style-type: none"> • Linear peristaltic infusion pump for fluid administration • Operating features, and characteristics: • Automatic control of infusion rate independent of venous or arterial pressure, solution container height, and solution viscosity. • Automatic switchover to keep vein open (KVO) rate of 1.0 ml/hr (or previous rate, whichever is less) • Flow Sensor: Detects a "no flow" situation i.e. empty container. • Display: Numeric display which indicates flow rate and volume infused. <p>Parameters:</p> <ul style="list-style-type: none"> • Set infusion rate range: 0.1 -999 ml/hr in 1 ml/hr increments. • Volume limits selection: From 0.1 -9999 ml. • KVO RATE: 1 ml./hr or set rate whichever is lower. • Accuracy : 5% • capable to handle Standard Infusion Set Alarms: • Visual and Audible • Activated by Empty Container. Occlusion Low Battery Air-in-line detector, internal malfunction. Operating Requirement • AC. 220V / 50H.z Battery: • Rechargeable batteries with 2 hours operation when fully charged. 	15 Nos.
09.	<p>CONVECTIVE WARMING SYSTEM</p> <ul style="list-style-type: none"> • The convective warming system provides an easy solution in maintaining normothermia. The convective warming unit should has an intuitive screen showing the temperature and status of each of the 5 temperature settings. The soft but strong blanket tailored for most surgical procedures, offering tear resistance, even airflow and patient comfort. • Should have 5 temperature settings to customize & adjust treatment based on the patient's need i.e. room temperature, 34, 40, 45, 47. • Should have Boost Mode for rapid warming, air is generated at 47 °C for 45 	02 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>minutes, after which the temperature automatically drops to the 45 °C (High) temperature setting.</p> <ul style="list-style-type: none"> • Should have HEPA Filter for removing at least 99.97% of particles 0.3 micrometers or larger from the air delivered to the warming blanket. • The warming unit should monitors the amount of time the filter is in use and indicates when the filter needs to be replaced. • Should have Thermal Protection Thermostat. Automatic Over and Under Temperature Protection at any of the heated air settings, if temperature of the generated air is out of range for a specific amount of time, the heater and fan automatically shut off and alarm is issued. <ul style="list-style-type: none"> • Average Alarm Level: 56 dB@1 meter • Display: Color LCD • USB Port: for Service use • Mounting Facility: Bed Hook. IV Pole • Power Requirements: 100 to 240 V AC • Max. current at 240 V = 5 A • Input Frequency: 50/60 Hz \pm 1 Hz. 	
10.	<p>AUTOCLAVABLE ENODSCOPIC SAPHENOUS VEIN HARVESTING SYSTEM TO BE USED WITH EXISTING CAMERA SYSTEM LED NOVA 150 MODEL 20161220, KARL STORZ</p> <p>Endoscopic Vein Retractor, for harvesting the great saphenous vein, distal width 25 mm, working length 27 cm, with insufflation channel, with integrated guide in handle for fiber optic light cable, autoclavable, for use with Telescope</p> <p>Consisting of: Vein Retractor, FREIBURG model, Cleaning Adaptor, Cleaning Brush</p> <ol style="list-style-type: none"> 1. Forward-Oblique Telescope 45°, diameter 5 mm, length 29 cm, autoclavable, fiber optic light transmission incorporated, color code: black (1 No.) 2. Ring Dissector, for blunt exposure of the vessel, distal angled to right, size 3 mm, working length 41 cm (2 Nos.) 3. Ring Dissector, for blunt exposure of the vessel, distal angled to left, size 3 mm, working length 41 cm (2 Nos.) 4. Clip Applicator for ligating clips , (medium),dismantling, rotating, with ratchet to lock the jaw part holding the clip, size 10 mm, length 36 cm, Consisting of: Metal Handle, with ratchet, Metal Outer Tube Insert (2 Nos.) 5. Pilling-Weck Titanium-Clips, medium, box with 10 sterile cartridges, 25 clips each, for use with applicators (2 Nos.) 6. Coagulation and Dissecting Electrode, with suction channel, with connector pin for unipolar coagulation, size 5 mm, length 36 cm (2 Nos.) 7. Retractor, 2 x 2 prongs, length 11 cm (2 Nos.) 8. Scissors, rotating, dismantling, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, spoon-shaped jaws, serrated, curved, length of jaws 20 mm, size 5 mm, 	01 Set

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>length 43 cm Consisting of: Plastic Handle, without ratchets, Metal Outer Sheath, insulated, Scissors Insert for use with telescopes with inbuilt working channel and trocars size 6 mm (2 Nos.)</p> <p>9. Hook Scissors, rotating, with connector pin for unipolar coagulation, size 5 mm, length 43 cm, single action jaws, Consisting of: Plastic Handle, without ratchet Outer tube, insulated Scissors Insert (2 Nos.)</p> <p>10. Grasping Forceps, , rotating, dismantling, with connector pin for bipolar coagulation, single action jaws, narrow jaws, for fine dissection, grasping and bipolar coagulation of fine structures, size 5 mm, length 43 cm Consisting of: Plastic Handle, without Ratchet, color code: light blue Outer Sheath Forceps Insert (2 Nos.)</p> <p>11. Endo-Loop Ligature, with knot, for bleeding stumps, with absorbable synthetic suture, for single use, sterile, USP 0, size 3 mm, length 33 cm, package of 12 (2 Nos.)</p> <p>12. Unipolar High Frequency Cord, with 4 mm plug, length 300 cm (4 Nos.)</p> <p>13. Bipolar High Frequency Cord, length 300 cm (4 Nos.)</p>	
11.	<p>OPG MACHINE Exposure time: PAN 7.3 – 13.8 sec, CEPH 4.5 – 15 sec Dose x area evaluation (DAP): Standard Image area: PAN 14.6 x 30cm, CEPH 18x22, 24x22, 29x22 cm Image transfer: Ethernet – USB memory stick CCD Pixel size: 48 µm Effective image resolution: 5.2 lp/mm Image size: 1536x2800 (standard PAN) - 3000 x 2305 (CEPH, max) N/A Acquisition depth: 12 bit (4096 levels) DICOM connectivity: Print, Store, Worklist Generator: High frequency, 200kHz constant potential High Voltage: 60 – 86kV Current: 6 – 12 mA Focal spot: 0.5 IEC 336 Spine compensation: Automatic kV modulation Absorbed current: 6.6 A @ 220-240 V Basic unit Adult Panoramic Child Panoramic Open-Closed mouth lateral TMJ P-A Sinus (rotational) Half Panoramic adult Half Panoramic child Orthogonal Projection Low Dose Panoramic Frontal Dentition Single Bitewing Double Bitewing Ceph version Lateral Ceph A-P and P-A Ceph Carpus (hand) Implant 3 transverse layers on any dental element</p>	03 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<p>LASER PRINTER FOR DIGITAL OPG (Preferably compatible with FujiFilms)</p> <p>Technology</p> <ul style="list-style-type: none"> • Photo thermographic (dry laser) <p>Image quality</p> <ul style="list-style-type: none"> • 325 pixels per inch, 78 micron laser spot spacing • 14-bit pixel depth architecture <p>Film sizes</p> <ul style="list-style-type: none"> • 14 x 17 in. (35 x 43 cm) • 11 x 14 in. (28 x 35 cm) • 10 x 12 in. (25 x 30 cm) • 08 x 10 in. (20 x 25 cm) 	
12.	<p>DENTAL X-RAY UNIT</p> <p>Rated electric power: 0.800KW High frequency technology: 100 KHz Absorption: 6A Focal Spot: 0, 7 mm IEC 336 0 of long cone at the end of spacer: 6 CM Total filtration: 2mm A1 Selectable anode current: 4.7 mA Selectable voltage to x-ray tube: 60 – 70 Kvp Dispersed redaction: ≤ 0,25mG/h a 1 meter from focus 1 Exposure time: 0.020-1.000ms Power Supply: 190-240V 50Hz Intermitted Operation: 1/30 1s exposure 30s reset max Distance: F.F 20 cm Dead man logic control Digital radiation key</p> <p>Exposure quality of the offered equipment must be infinite</p>	7 Nos.
13.	<p>INDUCTION CASTING MACHINE</p> <p>Continuous-reading control and stabilization of the temperature in the range from 800 to 2000° C. Casting of precious and non-precious metals. Equipped with motor acceleration regulator to control the metal flow to the ring. Built-in cooling system. Use of crucibles in ceramic, coated ceramic, graphite or sintered graphite.</p> <p>Standard accessories: 4 ring holders, 4 rings of stainless steel ,1 universal rubber sprue former 1 crucible per type ,5 ceramic stirring rod, 1 pair of safety goggles.</p> <p>Technical Specification</p> <p>Max. Casting capacity : 5 cc precious - 15 cc non precious Casting time : 30 gr Cr-Co 60" Max. Consumption : <4.5Kw</p>	01 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
14.	<p>PORTABLE X-RAY SOURCE (FOR DENTAL)</p> <p>X-Ray Generator: DC High Frequency Tube Voltage: 60 kV Tube Current: 2mA X-Ray Tube Anode Type: Stationary X-Ray Tube Anode Angle: 20° X-Ray Tube Focal Spot: 0.8 mm X-Ray Tube Heat Capacity: 8.5 Khu Exposure Time Setting; 0.01 ~ 1.60 sec. (0.01 sec. step) Total Filtration: 2.8 mm Al SSD: 100 mm / 200 mm (long cone)</p>	03 Nos.
15.	<p>PHOSPHORUS PLATE DIGITAL RADIOGRPAH SYSTEM</p> <p>With compatible Scanner Super High Resolution up to 18 LP / mm High Resolution: 14 LP/ mm High Speed: 8 LP/ mm Imaging Plate Size: Size 0 – 22 mm x 35 mm (Quote separate price) (Height x width) Size 1 – 24 mm x 40 mm (Quote separate price) Size 2 – 31 mm x 41 mm (Quote separate price) Size 3 – 27 mm x 54 mm (Quote separate price) Size 4 – 57 mm x 76 mm (Quote separate price)</p>	03 Nos.
16.	<p>DEFIBRILLATOR</p> <ul style="list-style-type: none"> • 7" color graphic TFT LCD display • 360 J energy, Biphasic Waveform Technology • Built-in standard 12-lead ECG • Synchronous or asynchronous mode • Semi-automatic (AED) or manual control • Operation from paddles • Short charging time, typically 2.7 secs to 200 J , 4.5 secs to 360 J • Alarm functions • 3-channel high-resolution recorder • Optional transcutaneous pacemaker • Optional SpO2, NIBP • Optional electrodes for internal defibrillation • 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. • Report Browser Software On PC, from exported USB data. 	3 Nos.
17.	<p>ECG MACHINE 12 CHANNELS</p> <ul style="list-style-type: none"> • 12 lead interpretative ECG. • 5.6" graphic LCD • 3/6/12ch ECG recording. • Multi-languages • Built-in high resolution printer • Rechargeable battery About 3 Hours with fully charge battery. 	12 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	<ul style="list-style-type: none"> • Storage memory for 50ECGs,Option(1GB SD card):5000ECGs • Software management system[PC Interface:RS232, LAN • Full alphanumeric capability keyboard • Firmware upgrade using USB memory stick • A4size z-fold type ECG recording paper. • One-button operation for acquisition, analysis, storage and printing. • LCD preview of ECG signal appear a false lead and signal noise. • Full alphanumeric keyboard for operation convenience. • Real-time continuous recording capability of 3,6,12 channels. • Using the RS232, LAN or SD card , ECG can be transmitted to PC • from the cardiograph for ECG management. • Server /client network service capability • Image (Jpeg or bmp) report printing capability 	
18.	<p>CHEMOTHERAPY MOTORIZED CHAIR Minimum Load 150 Kgs. Total length not less than 1900 mm Total width not less than 880 mm with arms Electronically controlled Backrest, Seat-rest, Leg-rest and Height adjustment Adjustable Footrest Adjustable Armrest Standard I.V. Pole Food Tray / Table Covering for protecting the chair not corrosion, waterproof, dustproof, easy to clean & disinfect and maintain Upholstery with polyurethane, luxurious, comfortable and durable Lockable Casters.</p>	6 Nos.
19.	<p>VERTICAL LAMINAR FLOW CABINET Cabinet size 2ft x 3ft x 78 inches (To provide class 100) Stainless Steel table top and covering MS powder coated sheet, H13, HEPA Filter efficiency: 99.99% @ 0.3µm Washable synthetic pre-filter dust holding capacity: 90% UV and fluorescence Light Blower capable to maintain 0.45 m/s face velocity +/- 20% Variable speed control Minihelic gauge</p>	01 No.
20.	<p>HORIZONTAL LAMINAR FLOW CABINET Cabinet size 2ft x 3ft x 78 inches (To provide class 100) Stainless Steel table top and covering MS powder coated sheet, H13, HEPA Filter efficiency: 99.99% @ 0.3µm Washable synthetic pre-filter dust holding capacity: 90% UV and fluorescence Light Blower capable to maintain 0.45 m/s face velocity +/- 20% Variable speed control Minihelic gauge</p>	01 No.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
21.	<p>DEIONIZED WATER PLANTS</p> <p>Production Requirement Production 120 liters per hour or more Delivery flow rate 4 liter per mint at 1 bar or better Resistivity > 15 M Ohm at 25 C (upto 18 Mega Ohm or more) Bacteria typical <1 CFU/ nsl 2 or better Particles 0.05 µm filter or less Silica < 0.05 mg/l or less</p> <p>Feed Water Requirement Conductivity < 2000 µS/ cm3 or less Hardness <250 ppm as CaCo3 or less Free chlorine < 4 ppm cl2 or less Chloramine < 1ppm Cl2 or less Silica,< 30 ppm SiO2 or less Iron/mangnese < 0.1 ppm or less Temperature 4-40 *C Flow rate requirement 15*C : 9 liter /min Organics < 30 ppm (TOC) or less</p>	02 Nos.
22.	<p>ELECTRIC MOTORIZED HOSPITAL BED with (battery backup) Five function bed Patient area: 34" X 80" Bed Size: 36" X 82" Hi Lo, Backrest & Knee rest, trendelenburg & antitrendilenburg operated by Handset control, supported by controller with battery backup Two ways tilt instantly, Radiolucent Backrest is with controls on handset, facilitates use the C arm imaging. Usable X-Ray area L 27" X W 29" four section perforated top, MS 18 SWG top Sheet, (1" X 2") 14 SWG Pipe Frame, (60" X 30") 14 SWG Base Pipe Frame, 3MM sheet mechanism structure, Imported Detachable PVC Head and Foot boards, 5" Imported Lockable Casters with anti static tyres (Germany), Provision for IV pole complete finishing in Scratch resistance epoxy powder coated . <i>(Sample must be submitted with the offer for evaluation/approval)</i></p>	30 Nos.
23.	<p>CRASH CART TROLLEY Size: 18" x 26" x 38" Stainless Steel 304 Grand finish Top with ½ Stainless Steel Pipe Rail, Heavy Duty 18 SWG Sheet Body Structure with 16 SWG Pipe Work, Detachable molded Bins in top 2 drawers, Equipped With Side Bumpers, 5" Imported Casters with 2 breaks, Scratch resistance epoxy powder coated. <i>(Sample must be submitted with the offer for evaluation/approval)</i></p>	3 Nos.
24.	<p>MEDICINE TROLLEY Size: 18" x 26" x 42" Stainless Steel 304 Grand finish Top, Heavy Duty 18 SWG Sheet body Structure with 16 SWG Pipe Work, 16 Detachable Bins, 1 Drawer Detachable molded</p>	4 Nos.

Item No.	Name of Goods, Technical Description, Specifications and Standards	Qty.
	Bins, Equipped With Side Bumpers, 5" Imported Casters with 2 breaks, Scratch resistance epoxy powder coated. <i>(Sample must be submitted with the offer for evaluation/approval)</i>	
25.	BED SIDE CABINET Size: 16" x 17" x 34" Heavy duty 22 SWG MS body Structure, 18 SWG Pipe Frame, ABS Plastic top, 4 Imported Casters 2", Epoxy Powder Coated, One Drawer, One Open Shelf & One Shelf with door, mounted on four 2" antistatic Casters <i>(Sample must be submitted with the offer for evaluation/approval)</i>	30 Nos.
26.	OVER BED / FOOD TABLE Top Size: 15" x 31" (2" & 1" x 2") 16 G Pipe Work, Heavy Duty Structure, Laminated Table Top, Adjustable Height, Epoxy Powder Coated, mounted on four 2" antistatic Casters <i>(Sample must be submitted with the offer for evaluation/approval)</i>	30 Nos.
27.	ATTENDANT BENCH Size: 72" x 24" x 18" 1/ ¼" 16 SWG Round pipe Structure, 4" Mattress with plywood, imported Rexene cover, 4 rubber legs, scratch resistance epoxy powder coated. <i>(Sample must be submitted with the offer for evaluation/approval)</i>	20 Nos.
28.	I.V. STAND 1 ¼" (4' Feet) Pipe attached in mobile. (1 ¼") Round grand finish 16 SWG Stainless Steel 304 pipe adjust (1 ¼") Square 16 SWG Stainless Steel 304 Mobile Pipe Base, Telescopic height adjustment from 47" to 85", Imported Casters, 4 hooks for drip, Heavy Duty Structure. <i>(Sample must be submitted with the offer for evaluation/approval)</i>	35 Nos.
29.	Bone Marrow Collection (Harvesting) Stand	02 Nos.
30.	ANATOMICAL MODELS & HISTOLOGY SLIDES a. GIANT FUNCTIONAL CENTER BRAIN (A72) Brain model reproduces the brain of a right-handed person, employing contrasting colors and hand-lettered captions to locate and identify motor and sensory functional centers. In addition to focusing on the intellectual role of the dominant left brain, and the creative role of the right, the model highlights the emotional, sexual, memory and learning functions of the limbic system. Sensory regions and centers receptive to 20 specific body regions are distinguished, as are the motor centers controlling 19 body regions. More than 120 features, hand-numbered on the model, are identified in the corresponding key.	1 Set

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b.	<p>FIVE-PART BIASECTED HEAD (A76) Life-size vinyl reproduction of the head and neck has been sectioned into halves near the median to display interior details of the brain, nose, mouth and throat, as well as exterior features of the head and skull.</p> <p>The skin and muscles of the right half have been removed to expose the facial bones of the skull, sinuses, air cells of the ethmoid bone, parotid gland, and the eyeball in its bony orbit. To facilitate further study, the eyeball, tongue, and facial bone detach. 104 numbered features are identified in the corresponding key.</p>	
c.	<p>GIANT EYE IN BONY ORBIT (A28) 6 times life-size (twice the size of competitors' models) and dissectible into eight parts, vinyl eyeball sits in its bony socket to provide a better understanding of its relationship with major blood vessels, muscles and nerves. All six muscles of movement can be seen and the upper half of the eyeball with its lacrimal (tear) gland lifts off. Present and extractable are the superior and lateral rectus muscles, the iris and cornea, which can be removed as a unit, the Lucite lens, which actually magnifies and inverts images, and the transparent vitreous body, which exposes the fovea centralis on the retina. The choroid coat, retina, and optic disk can also be seen, as well as a schematic cross section through retinal layers. 77 hand-numbered features are identified in the accompanying key.</p> <p>Included a reproducible black line copy master with numbered parts that correspond to the model, making it easy to print illustrated study sheets. Answer key is on reverse.</p>	
d.	<p>GIANT FIVE-PART EYEBALL (A22) Six-times life-size, unbreakable vinyl plastic replica is packed with useful teaching features. On the exterior of the eyeball is the cornea, through which the iris and pupil are visible, the large lacrimal (tear) gland, attachments for all six extrinsic muscles of the eye, the optic nerve roots, and surrounding blood vessels.</p> <p>The eyeball divides in half for study of the interior including the meticulously hand-painted choroid coat of the retina. Here, several removable parts are discovered such as the vitreous ball, iris/cornea, and Lucite lens, capable of magnifying and inverting images when removed from the model. Rods, cones, and other retinal microstructures are detailed in a highly-magnified, diagrammatic cross-section.</p> <p>42 hand-coded features are identified in the corresponding key.</p>	
e.	<p>NOSE AND OLFATORY ORGAN SET (A95) Two unbreakable plastic models on one hardwood base depict the nose and nasal passages enlarged to 4 times their normal size. The model on the right shows the nasal septum, its arteries and veins, the inner group of olfactory nerve filaments, nasopalatine nerve, soft and hard palate, uvula and the cranial floor. The model on the left depicts the left nostril, olfactory nerve, bulb and filaments, sphenopalatine ganglion, communicating sinuses, arteries and veins, the pharyngeal</p>	

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	orifice of the Eustachian tube and the nasal conchae. The turbinate bone and nasolacrimal canal are also presented. 32 numbered features are identified in the accompanying key.	
f.	<p>DELUXE SPINAL CORD (A65) 6 times life-size, vinyl plastic model replicates a segment of the upper thoracic spinal cord. Sectioned both longitudinally and in cross section, a portion of white matter of the right half has been cut away to expose the anterior and posterior nerve roots. Color-coding differentiates them and a color-keyed circuitry schematic is mounted along with the model on a hardwood base. 30 numbered features are identified in a corresponding key.</p>	
g.	<p>RIGHT HALF OF HEAD AND NECK MUSCULATURE (A74) Sagittally sectioned, unbreakable vinyl replica represents the human head and neck down to the level of the clavicle. Surface muscles and blood vessels are depicted on one side, while the other shows the median section through the interior. 119 features are numbered and identified in the corresponding key</p>	
h.	<p>DELUXE EIGHT-PART EAR (A34) 5 times life-size in unbreakable vinyl, detailed ear model provides a more complete perspective of the middle and inner ear structures within the temporal bone.</p> <p>All the skin has been peeled off the detachable auricle to expose its cartilaginous structure, muscles, auricular arteries and nerves, as well as the entrance to the auditory canal. Sections of the petrous and mastoid portions of the temporal bone can be lifted off to expose the middle and inner ear chambers. The tympanic ring with its see-through tympanic membrane and attached ossicles can also be lifted out.</p> <p>The extractable labyrinth is dissectible into three portions. Half of it, consisting of the semicircular canals and vestibule, demonstrates the sense of balance. Transparent tubing with colored liquid represents two of the semicircular canals. An air bubble in each will move when tipped, demonstrating the canals' function in equilibrium. The other half of the labyrinth, upon removal, shows the vestibular and cochlear nerves, which join to form the auditory nerve. The cochlea itself separates into halves to reveal cochlear, vestibular and tympanic ducts and the branching of the cochlear nerve.</p> <p>95 hand-numbered features are identified in the corresponding key.</p>	
i.	<p>GIANT FUNCTIONAL LARYNX (AP48) 4 times life-size and uniquely American-made, unbreakable vinyl replica is complete with hyoid bone and epiglottis. The right side depicts only the cartilaginous structure, while the left shows the musculature as well. Movable vocal cords, arytenoid cartilages and epiglottis all accurately demonstrate their functions. Perfect for speech correction and music, as well as anatomy and physiology, 55 hand-coded features are identified in the accompanying key.</p>	

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j.	<p>EMBRYONIC DEVELOPMENT MODEL IN 12 STAGES (VG391) The model represents the development of the human germ cells from fertilisation until the end of the 2nd month of pregnancy in 12 stages. Each stage can be removed from the common stand as an individual part and can be purposefully used for teaching and tests for the embryological specialist field.</p> <ul style="list-style-type: none"> • Ovum at time of fertilisation (conception) with male gamete (sperm) • Zygote at 2-cell stage, approx. 30 hours after fertilisation • Zygote at 4-cell stage, after around 40-50 hours • Zygote at 8-cell stage, after around 55 hours • Morula • Blastocyst after around 4 days • Blastocyst after around 5 days • Blastocyst after around 8-9 days • Germ cells at approx. 11th day • Germ cells at approx. 20th day • Embryo at around the end of the 1st month of pregnancy • Embryo at around the end of the 2nd month of pregnancy 	
k.	<p>MULTI-TORSO: MALE & FEMALE CONFIGURATION (T15) 48 dissected structures, 30 removable parts The FULL-SIZE Multi-Torso:</p> <p>Multipurpose: with complete musculature on one side, and skin and surface topography on the other. • Multifaceted: with 11 LIFE-SIZE organ systems: Skin - Skeletal - Muscular - Nervous and Sense Organs - Respiratory - Cardiovascular - Lymphatic - Digestive - Urinary - Endocrine - Reproductive. • Multidimensional: with 5 interchangeable pelvic inserts - genderless, male, non pregnant female, or pregnant female in the 1st or 3rd trimesters – with 5 different torso models rolled into one.</p> <p>Furnished with the four-part male pelvic insert, the four-part non-pregnant female pelvic insert, and the removable mammary gland.</p>	
l.	<p>BONE STRUCTURE MODEL (A92) Depicting a fragment of compact bone about the size of a pinhead magnified approximately 500 times, hand-painted model shows one complete haversian system and a portion of two others in cross-section. Lamellae are cut away at various depths in step-wise fashion.</p>	
m.	<p>HUMAN SKIN SERIES (A942) WITH BURN PATHOLOGIES Three-dimensional and magnified 75 times. The front face of the model compares and contrasts normal healthy skin from three different body regions: the palm or sole (totally hairless) • the axilla or arm pit (sparsely endowed with hair) • the scalp (completely hirsute)</p> <p>The epidermis, dermis, and hypodermis, as well as the glands, hair follicles, nerves and receptors are all sculpted in full relief with contrasting colors. 46 features are identified in the accompanying key. The back face shows the</p>	

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	<p>progressive severity of injury caused by burns - from the reddening and transitory damage of the first degree burn, to the blistering, often permanent damage of the second degree burn, to the deep charring and permanent tissue destruction of the third degree burn. Burn segments are fully labeled on model.</p>	
n.	<p>SKELETON MODEL (A10) Standard model of a human skeleton, very high quality and robust construction, perfect for use in hospitals, schools, universities and laboratories. On a stable metal stand with 5 casters!</p> <ul style="list-style-type: none"> • Exceptional value for money • 3 year guarantee • Top quality natural casting • Final assembly carried out by hand • Made from a durable, unbreakable synthetic material • On a stable metal stand with 5 casters (painted white) • Close to the realistic weight of around 200 bones • Natural skeleton size • 3 part assembled skull • Individually inserted teeth • Limbs can be removed quickly and easily • With metal stand and transparent dust cover 	
o.	<p>9-STAGE HUMAN PREGNANCY SERIES (0304-11) Details human development from 4th week through 7th month</p> <p>Encompassing a four-week embryo depicted 25 times life-size, plus eight life-size models of the pregnant uterus illustrating key developmental stages and fetal positions, including twinning - each of the five later stages permits the fetus to be lifted from the uterus for detailed examination.</p> <p>Mounted on individual pedestal bases. The models range in size from 5x5x7 inches (12x12 x19cm) to 6x13x11 inches (15x32x27 cm).</p>	
p.	<p>SAGITTAL BRAIN SECTION (A79) Sectioned through the right side of the brain and base of the skull, enlarged section is also double-sided. One surface conforms to the median plane and includes a section of the falx cerebri. The reverse surface depicts a sagittal cut which exposes the lateral ventricle.</p> <p>49 color-coded features of the brain and meninges are identified in the accompanying key. The model rests on a detachable stand.</p> <p>Overall dimensions: 10x7x5 inches (25x18x12 cm).</p>	
q.	<p>CLASSIC THREE-PART SKULL WITH NUMBERING (0257-21) Rendition of Classic Skull enhanced with hand numbering of the bones and</p>	

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	major osteological features on one side. In addition, all the suture lines have been highlighted in yellow to make it easier to discern the interlocking bony plates which together comprise the human skull. A key to all numbered structures is furnished.	
r.	<p>MANDIBLE OF YOUNG ADULT (A83) The left mandible of a post-adolescent with its full complement of eight teeth, approximately three times life size, is faithfully rendered in unbreakable plastic. The bony outer layer of the jaw is cut away, exposing the mandibular blood vessels, roots of the teeth, and their nerves. Sectioned longitudinally from crown to root, one molar shows the destructive action of caries, while another exhibits advanced inflammation (pulpitis). The inner surface of the jaw shows the submaxillary and sublingual salivary glands. Forty-eight numbered features are defined in the accompanying key. Overall dimensions: 13×14×9 inches (33×36×23 cm).</p>	
s.	<p>FETAL HALF SKULL WITH DURA MATER (SK39) Medical quality plastic reproduction of an actual specimen is bisected and beautifully illustrates the dual membrane, fontanel and developing bones.</p>	
t.	<p>HEAD MODEL 6 PARTS (C09/1) Life-size 6-part head is mounted on a base and features a removable 4-part brain half with arteries. The eyeball with optic nerve is also removable and one side of the high quality model exposes the nose, mouth cavity, pharynx, occiput and skull base. Head model is delivered on a removable base for easy display in a classroom or doctor's office.</p>	
u.	<p>DELUXE BISECTED SKULL (0281-00) To reveal the hidden complexities of the sinuses and nasal passages With the look and feel of real bone, highly-detailed plastic reproduction divides mid-sagittally. Especially suited for examination of the cranial vault, sinuses, nasal passages and palate, one half includes the nasal septum and complete mandible. The other half exposes the nasal conchae and nasal passages.</p>	
v.	<p>CLASSIC HEART SET ON SINGLE WOOD BASE (A388) Classic Heart shows the ventricles, atria, veins and aorta in precise detail. The front heart wall is detachable to reveal its inner valves and chambers. Ideal for explaining the treatment of coronary heart disease, the Classic Heart with Bypass model contains all of the features above, plus color representations of venal bypasses to the right coronary artery and ramus interventricularis anterior, as well as the ramus circumflexus of the left coronary artery. Transparent to illustrate the vessels of the heart, the Classic Heart with Conducting System shows the coronary arteries and veins in colored relief, and the complete conducting system is also represented in color. The front heart wall is removable, and the entire heart can be taken off its stand.</p>	

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w.	<p>FLEXIBLE SPINE WITH THORAX AND MOVABLE FEMUR HEADS (SP64) Perfect for respiratory studies. Full-size natural cast replica of an adult male specimen makes an ideal subject for meaningful study of respiratory mechanics.</p> <p>Because provided with the entire rib cage in addition to a flexibly-articulated vertebral column, can reproduce all the natural movements of the spine and thorax.</p>	
x.	<p>BASIC MEDICAL HISTOLOGY SLIDES SET (311998) Basic collection of 50 slides taken from human or comparable mammalian tissues. Most organ systems and tissues should be available.</p>	

SPECIAL NOTE:

- i. The Purchaser will evaluate and compare the bids on itemized basis OR on the basis of a group OR a combination of groups OR as total of groups.
- ii. Port of Shipment and Country of origin of “MAJOR PART(S) OF THE EQUIPMENT” must be clearly reflected separately in the Technical and Financial bids. The “Origin” means the place where the “goods” are mined, grown, or produced.
- iii. Priority would be given to the goods manufactured in UK / USA / EU / JAPAN.
- iv. The above specifications are only for widest possible competition and not for favor any single contractor or supplier nor put others at a disadvantage. However, the brand name, catalogue No. / Name etc. has only been used for the reference purpose. Goods offered “AT LEAST EQUIVALENT” to requisite specifications shall also be considered.
- v. Equipment must be quoted with all the standard accessories.
- vi. UPS/Power protection for the equipment shall be incorporated in the systems, otherwise prices must be quoted separately.
- vii. All the civil works will be carried-out by the Dow University of Health Sciences, Karachi with the consultation of the responsive bidder.
- viii. Goods must be comply to the GMP & WHO standards. Bidder must provide procedures and services for DQ, IQ, OQ and PQ (if applicable).
- ix. All site specific work to be required in the system viz. Lead Glass/special antistatic flooring, environment control/radiation protection must be quoted separately.
- x. The bidder shall separately quote the price of service contract inclusive of parts as well as excluding the parts for 5 years (minimum) in term of %age for total contract value.

2. (a) **PRICE SCHEDULE IN PAK RUPEES delivered duty paid (DDP BASIS)**

FOR GOODS OFFERED WITHIN THE PROCURING AGENCY'S COUNTRY

S#	Detailed Specification of Goods	Model / Cat No.	Name of Manufacturer	Country of Origin	Port Of Shipment	Quantity of Stores	Unit	Rate Per Unit	Total Price
1	2	3	4	5	6	7	8	9	10
Total Amount in Pak Rs.									

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

NOTE:

Port of Shipment and Country of origin of "MAJOR PART(S) OF THE EQUIPMENT" must be clearly reflected separately in the Technical and Financial bids. The "Origin" means the place where the "goods" are mined, grown, or produced.

2. (B) PRICE SCHEDULE IN FOREIGN CURRENCY (CFR / C&F BASIS)

FOR GOODS OFFERED FROM OUTSIDE THE PROCURING AGENCY'S COUNTRY

S#	Detailed Specification of Goods	Model / Cat No.	Name of Manufacturer	Country of Origin	Port Of Shipment	Quantity of Stores	Unit	Curr-ency	Rate Per Unit	Total Price
1	2	3	4	5	6	7	8	9	10	11
Total Amount in Foreign Currency										

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

NOTE:

Port of Shipment and Country of origin of "MAJOR PART(S) OF THE EQUIPMENT" must be clearly reflected separately in the Technical and Financial bids. The "Origin" means the place where the "goods" are mined, grown, or produced.