



# LIAQUAT UNIVERSITY

OF MEDICAL & HEALTH SCIENCES  
JAMSHORO, SINDH  
Telephone: + 9213350, Exch.771240, Ext. + 122  
Email: [storesectionlumhs@yahoo.com](mailto:storesectionlumhs@yahoo.com),  
Web Site: [www.lumhs.edu.pk](http://www.lumhs.edu.pk)

NO.LUMHS/PSS/- 7008  
DATED: 04-06-18

## Say No to Corruption

To,

**Mr. Muhammad Ayub Ali Khan**  
Deputy Director (A&F)  
Sindh Public Procurement Regulatory Authority  
Barrack No.8, Sindh Secretariat No.4-A, Court Road,  
Karachi, Pakistan  
Ph# 99205369,

**SUBJECT: NIT & BIDDING DOCUMENTS FOR DISPLAY ON YOUR WEBSITE.**

In continuation of letter No. LUMHS/PSS/-5085, Dated:21-05-2018 (copy attached) & subsequently this office received letter No. AD/(ASMT)/-LUMHS/-2017-18/-5055, Dated: 25-05-2018 regarding subject cited above. The Extension in Tender Deadlines is published in Daily Dawn, Daily Kawish, Daily Jang & Daily Ibrat. (Copies are attached)


Please find herewith the NIT and Bidding Documents regarding tender for purchase & supply of **Category A.** Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras for various Departments at LUMHS, Jamshoro, **Category B.** Office Appliances, Furniture, Lab. Equipments, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors for Institute of Physiotherapy & Rehabilitation Sciences, LUMHS, Jamshoro **Category C.** Lab, Equipments, Computers, UPS, Furniture & Fixture for Institute of Biomedical Engineering & Technology, LUMHS, Jamshoro for display on your authority website as per Sindh Public Procurement Regulatory Authority rule.

### Following documents are already sent to your office

1. Notification of Procurement Committee.
2. Notification of Complain Redressal Committee (Rule-31)
3. Annual Procurement Plan for the FY 2017 -2018.
4. Original Demand Draft. No. 02414779, Dated: 23-05-2018 amounting to Rs. 2,000/- (Rupees Two Thousand Only) in favor of SPPRA as Website Hoisting Charges.

(The Previous News Clips of above Tender are also attached)

SPPRA INWARD DIARY  
NO : 9609  
DATED : 04-06-2018

  
Chairman,  
Central Purchase Committee  
LUMHS, Jamshoro.



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Web Site: [www.lumhs.edu.pk](http://www.lumhs.edu.pk)

NO. LUMHS/SS-5085  
DATED: 21-05-2018

## Say No to Corruption

To,

**The Managing Director,**  
Sindh Public Procurement Regulatory Authority  
Barrack No.8, Sindh Secretariat No.4-A, Court Road,  
Karachi, Pakistan  
021-99205369

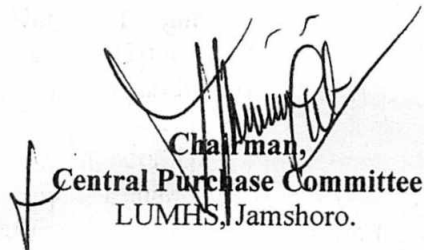
**SUBJECT: NIT & BIDDING DOCUMENTS FOR DISPLAY ON YOUR WEBSITE.**

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B/C

  
Chairman,  
Central Purchase Committee  
LUMHS, Jamshoro.



# Public Relations Section

## Liaquat University of Medical & Health Sciences

### Jamshoro, Sindh, Pakistan.

Phone No: 92-22-9213308 Ext. 104

Dated 02 JUN 2018

## NEWS CLIPPING

DAWN

The Daily ..... Hyderabad / Karachi



### LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES JAMSHORO, SINDH-PAKISTAN

Tel: (022) 921 3350, 921 3313 (Ext 122) Fax: (022) 921-3306  
Email: storesectionlumhs@yahoo.com Web: www.lumhs.edu.pk

#### NOTICE INVITING TENDERS

No. LUMHS/PSS/-7003 June 01, 2018

#### EXTENSION IN TENDER DEADLINES

This is with reference to our NIT published in this Newspaper of 15th May 2018 and all the Bidders as well as all concerned are requested to please note that the Competent Authority has **EXTENDED** the **Purchase & Submission Deadlines** as well as the **Opening Date** of this Tender. Now Tender Documents may be purchased up to **03:00 pm** on **Tuesday, 19th JUNE 2018**. Tenders will be accepted upto **11:00 am** on **Wednesday 20th JUNE 2018** and shall be opened on the **Same Day**, for **Category-A** at **11:30 am**, for **Category-B** at **12:30 pm** and for **Category-C** at **01:30 pm** in presence of Bidders or their Authorized Representatives.

All other Terms & Conditions of the Tender shall remain Unchanged

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PID (H)100890/2018

Chairman  
Central Purchase Committee  
LUMHS- Jamshoro



# Public Relations Section

Liaquat University of Medical & Health Sciences,  
Jamshoro, Sindh, Pakistan.  
Phone No: 92-22-9213308 Ext. 104

Dated: 02 JUN 2018

## NEWS CLIPPING

Daily  
**KAWISH**

The Daily ..... Hyderabad / Karachi



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OF MEDICAL & HEALTH SCIENCES**  
JAMSHORO, SINDH-PAKISTAN

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**NOTICE INVITING TENDERS**  
No. LUMHS/PSS-7003 June 01, 2018

**EXTENSION IN TENDER DEADLINES**

بحوالو اسانجو NIT جيڪو هن اخبار ۾ 15 مئي، 2018 تي شايع ٿيو، سمورن  
باقيدارن ۽ سمورن لاڳاپيل ماڻهن/ادارن کي اطلاع ٿو ڪجي ته مجاز اتار تي هن  
ٽيندر جي دستاويز جي خريداري جي تاريخ وڌيڪ ٽيندر جمع ڪرائڻ ۽ ٽيندر  
کلڻ جي تاريخن ۾ واڌ ڪري ڇڏي آهي ۽ هاڻ ٽيندر فارم اڱارو 19 جون،  
2018 ٽيپري 3 وڳي نائين خريد ڪري سگهجن ٿا. ٽيندرز اربع 20 جون،  
2018 تي صبح 11 وڳي نائين جمع ڪرايا وڃن جڏهن ته هي ٽيندر ساڳئي  
ڏينهن ڪيٽيگري A جي صبح 11:30 وڳي، ڪيٽيگري B جي منجهند  
12:30 وڳي ۽ ڪيٽيگري C کانپوءِ منجهند 1:30 وڳي واک ڏيندڙن يا سندن  
مجاز نمائندن جي موجودگيءَ ۾ ڪوليا ويندا.  
ٽيندر جي ٻين شرطن ۽ ضابطن ۾ ڪا به تبديلي نه آهي.

Chairman  
Central Purchase Committee  
LUMHS- Jamshoro

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PID (H)100890/2018



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Dated: 02 JUN 2018

## NEWS CLIPPING



The Daily ..... Hyderabad / Karachi

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**NOTICE INVITING TENDERS**  
No. LUMHS/PSS/-7003 June 01, 2018

**EXTENSION IN TENDER DEADLINES**

بحوالہ ہمارے NIT جو کہ ایشیا ہڈا میں 15 مئی 2018 کو شائع ہوا، تمام بولی دہندگان اور تمام متعلقہ افراد اداروں کو مطلع کیا جاتا ہے کہ مجازاً تصدیق نے اس ٹینڈر کی دستاویز کی خریداری کی تاریخ نیز ٹینڈر جمع کرانے اور ٹینڈر کھلنے کی تاریخوں میں توسیع کر دی ہے اور اب ٹینڈر فارم منگل 19 جون 2018 سے 3 بجے تک خریدے جاسکتے ہیں۔ ٹینڈرز بده 20 جون 2018 کو صبح 11 بجے تک جمع کرائے جائیں جبکہ یہ ٹینڈر اسی روز کھلی A کے صبح 11:30 بجے، کھلی B کے دوپہر 12:30 بجے اور کھلی C کے بعد دوپہر 1:30 بجے بولی دہندگان یا ان کے مجاز نمائندوں کی موجودگی میں کھولے جائیں گے۔

ٹینڈر کی دیگر شرائط و ضوابط میں کوئی تبدیلی نہیں ہے۔

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Central Purchase Committee  
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PID (H)100890/2018



# Public Relations Section

## Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan.

Phone No: 92-22-9213308 Ext. 104

Dated: 02 JUN 2018

### NEWS CLIPPING



The Daily .....

..... Hyderabad / Karachi

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**NOTICE INVITING TENDERS**

No. LUMHS/PSS/-7003 June 01, 2018

**EXTENSION IN TENDER DEADLINES**

بجوالو اسان جي اين آء تي جيڪو هن اخبار ۾ 16 مئي 2018 تي شايع ٿيو سمورن واک  
ڏيندڙن ۽ سمورن لاڳاپيل فردن/ ادارن کي آگاهه ڪجي ٿو ته مجاز اٿارٽي هن ٽيندر جي  
دستاويز جي خريداري جي تاريخ ۽ ٽيندر جمع ڪرائڻ ۽ کولڻ جي تاريخن ۾ واڌ ڪري  
چڏي آهي ۽ هاڻ ٽيندر فارم بروز آڱارو 19 جون 2018 تي منجهند 3:00 وڳي تائين  
خريد ڪري سگهجن ٿا. واک بروز اربع 20 جون 2018 تي صبح جو 11:00 وڳي تائين  
جمع ڪرائيندا جڏهن اهي ٽيندر انهيءَ ڏينهن ڪٽيگري A جا صبح جو 11:30 وڳي،  
ڪٽيگري B جا منجهند 12:30 وڳي ۽ ڪٽيگري C جا 1:30 وڳي واک ڏيندڙ يا انهن  
جي اختيارين ڏنل نمائندن جي موجودگيءَ ۾ کوليا ويندا.  
ٽيندر جي ٻين شرط ۽ شروطن ۾ ڪا به تبديلي نه ڪئي وئي آهي.

Chairman  
Central Purchase Committee  
LUMHS- Jamshoro

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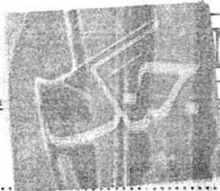
# Public Relations Section

## Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan.

Phone No: 92-22-9213308 Ext. 104

Dated: 15 MAY 2018

### NEWS



The Daily ..... Hyderabad / Karachi

**FINANCIAL PROPOSAL** لکھنا ہوا۔  
 دونوں قانون کو طے شدہ طریقہ ممبر کے کہ انہیں ایک تیسرے طائفے میں رکھا جائے اور تمام لٹاؤں پر یوٹی  
 دہندہ کا نام خود پر لکھا ہوا۔  
 نیٹور نام LUMHS۔ جامشورو کے پبلسٹیشن سے بھی ہفت روزہ اوقات میں جسمرات 17 مئی 2018  
 سے چھپنے لگا۔ جون 2018 تک خریدے جاسکتے ہیں۔  
 آئی ایم بی (A اور B) کی پیشکشیں جون 04 2018 صبح 11:00 بجے تک نیٹور نام میں  
 ڈال دی جائیں۔ نیٹور نام کی پیشکشیں ہفت روزہ اس موقع پر موجود رہنے کے خواہشمند ہونی اور نگران یا ان کے نمائند  
 ناموں کی موجودگی میں کی جائے گی۔ آئی ایم بی کے آئی ایم بی کے دوپہر 2:30 بجے اور نیٹور نام کے  
 کے دوپہر 01:30 بجے تک لے جائیں گے۔  
 نیٹور نام کی جانب سے دستاویزات، ڈراما، ایکٹو، ایکٹو مشینری کے نیٹور ناموں، ایکٹو میں درج  
 تہہ بہ تہہ اور مشینری کے نیٹور ناموں اور جانچ پڑتال کے بعد LUMHS کی پیشکشیں ہفت روزہ میں درج  
 (کم از کم 90 روپے) کے اندر پیشکشوں پر کامیاب قرار پانے والے ہونی اور نگران کی مالی تجاویز کو تسلیم کرنے کی جس کی  
 تاریخ اور وقت کے بارے میں پیشکشوں پر کامیاب قرار پانے والے ہونی اور نگران کا گواہ کرنا چاہئے گا۔ پیشکش  
 طور پر کام ہونے والی پیشکشوں کی مالی تجاویز کو تسلیم کرنے کے لئے ہونی اور نگران کو واپس کر دینی چاہئے گی۔  
 نیٹور نام پر ہفت روزہ SPPRA کے قوانین کے مطابق کسی بھی ایجنٹ کو سروس ڈیلتی کر سکتی ہے۔ تمام  
 تجاویز پر ہفت روزہ کے لئے نیٹور نام پر فرمیں لکھنا چاہئے گا۔ پبلسٹیشن SPPRA کے قوانین کی بنیاد پر  
 کسی بھی ایجنٹ کو سروس ڈیلتی کر سکتی ہے۔  
 حکمت کی جانب سے ایک اسٹ کے جانے والی فرمز اپنا لٹاؤ کی پیشکشوں پر فرمیں لکھنا چاہئے گا۔

Chairman  
 Central Purchase Committee  
 LUMHS- Jamshoro

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PC (H) 10083/27-18

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### نوٹس طلب مستعار

No. LUMHS/PSSA-3097 April 30, 2018  
 Tender invited under Sealed Cover from authorized  
 Dealers / Distributors registered with GST & Income  
 Tax for purchase & supply of Category A: Walk Through  
 Metal Detector Gate, Hand Held Metal Detector,  
 Biometric Face Finger Print Devices, Closed Circuit  
 Television (CCTV) with Cameras for various  
 Departments at LUMHS, Jamshoro, Category B: Office  
 Appliances, Furniture, Lab. Equipments, Computers,  
 Split Air Conditioners, UPS, Photocopier Machines  
 & Multimedia Projectors for Institute of  
 Physiotherapy & Rehabilitation Sciences, LUMHS,  
 Jamshoro Category C: Lab, Equipments, Computers,  
 UPS, Furniture & Fixture for Institute of Biomedical  
 Engineering & Technology, LUMHS, Jamshoro.

DESCRIPTIONS		
<b>Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras</b>		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
Category B: Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
<b>Category C: Lab, Equipments, Computers, UPS, Furniture &amp; Fixture</b>		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
<b>TENDER DOCUMENTS PURCHASING FROM</b>	<b>LAST DATE/TIME FOR TENDER PURCHASING</b>	<b>LAST DATE/TIME FOR TENDER SUBMISSION</b>
THU 17.06.2018 During Office Hours	FRI 01.06.2018 up to 10:00 am	MON 04.06.2018 up to 11:00 am
<b>TENDER OPENING OF CATEGORY-A</b>	<b>TENDER OPENING OF CATEGORY-B</b>	<b>TENDER OPENING OF CATEGORY-C</b>
MON 04.06.2018 at 11:30 am	MON 04.06.2018 at 12:30 Noon	MON 04.06.2018 at 01:30 pm

نوٹس طلب مستعار نیٹور نام میں درج ہیں۔  
 نیٹور نام نیٹور نام میں درج ہیں اور وضوایا SPPRA کی ویب سائٹ  
 www.lumhs.edu.pk لUMHS کی ویب سائٹ www.pprasindh.gov.pk  
 ڈاؤن لوڈ کیا جاسکتا ہے اور نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 3,000 روپے تک ہے اور نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 تمام ریس چارج لیاقت اور نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 ہر اسٹاک کے لئے نیٹور نام میں درج ہیں اور وضوایا SPPRA کی ویب سائٹ  
 www.lumhs.edu.pk لUMHS کی ویب سائٹ www.pprasindh.gov.pk

1. مالی ایجنٹس سرٹیفکیٹ (ATN)
2. موثر GST رجسٹریشن سرٹیفکیٹ
3. کوئی بھی پیشکش پر واپس
4. باضابطہ ڈیٹا شیٹ کا سرٹیفکیٹ

برائے نیٹور نام A اور B :  
 پیشکشیں مسئلہ ایجنٹوں کے طریقے پر ہونی چاہئے۔ ایجنٹوں کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 3,000 روپے تک ہے اور نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 DD/اپے آرڈر (باقلی واپس) ہونا چاہئے اور لٹاؤں پر TECHNICAL PROPOSAL  
 واضح طور پر لکھا ہوا۔

دوسرے طائفے میں نیٹور نام A اور B کیلئے پاکستانی روپوں میں یا GST کی رقم اور لٹاؤں پر (دوسرے  
 پیشکشوں کی قیمت کے 5% سے زیادہ) کے لئے نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔  
 تمام ریس چارج لیاقت اور نیٹور نام کے لئے اس کی قیمت 3,000 روپے تک ہے۔



# Public Relations Section

## Liaquat University of Medical & Health Sciences,

### Jamshoro, Sindh, Pakistan

Phone No: 92-22-9213308 Ext. 104

15 MAY 2018

Dated: \_\_\_\_\_

## NEWS CLIPPING

### ڪاوش

The Daily .....

Hyderabad / Karachi

پهري لافان کي الڳ الڳ مهيند ڪري انهن کي هڪ ٿيڻ لافاني پر ڪيو وڃي ۽ سمورن لافان تي واک ڏيندڙ جو نالو واضح طور تي لکيل هجي.

ٽينڊر فارم LUMHS، ڄامشورو جي پرجيز سيڪشن مان به آفيس وقت دوران خيس ڏينهن 17 مئي، 2018 کان جمع 01 جون، 2018 تائين خريد ڪري سگهجن ٿا.

سموري ڪئٽيگري (A، B، C) جون آچون سوم 04 جون، 2018 صبح 11:00 وڳي تائين بند باڪس ۾ وڌا وڃن. ٽينڊرن جون ٽيڪنيڪي تجويزون هن موقعي تي موجود رهڻ وارا خواهشمند واک ڏيندڙ يا ان جي مجاز نمائندن جي موجودگيءَ ۾ ڪئٽيگري-A کي صبح 11:30 وڳي، ڪئٽيگري-B کي صبح 12:30 وڳي ۽ ڪئٽيگري-C کي پھريءَ 1:30 وڳي کوليا ويندا.

ٽيڪنيڪل ڪمپني طرفان دستاويزات، ڊرائينگس، ايڪيوريمينٽس مشنري جا فرنيچرز، نمونن، ڪيٽلاگ ۾ ذڪر ڪيل تصريحات ۽ انسٽرومينٽس جي تفصيلي جازي ۽ چند چاڻ کان پوءِ LUMHS آچن جو موثر رهڻ جو منو (گهٽ ۾ گهٽ 90 ڏينهن) جي اندر ٽيڪنيڪي طور تي ڪامياب قرار ڏنل واک ڏيندڙ جن مالي تجويزون کوليندي جنهن جي تاريخ ۽ وقت جي باري ۾ ٽيڪنيڪي طور تي ڪامياب قرار ڏنل واک ڏيندڙن کي آگاه ڪيو ويندو. ٽيڪنيڪي طور تي ناڪام هئڻ واري آچن جي مالي تجويزون بنا کولڻ جي واسطيدار واک ڏيندڙ کي واپس ڪئي ويندي.

سينٽرل پرجيز ڪميٽي ايس پي پي آر تي جي قانون مطابق ڪنهن به انٽر ڪمي ڊي/ Delete ڪري سگهي ٿي.

شرطن ۽ ضابطن تي پورو ٺهندڙ ٽينڊر شور هيٺ نه ايندا، پروڪيورنگ ايجنسي ڪنهن به سمورن آچن کي رد ڪري سگهي ٿي.

حڪومت طرفان پبلڪ لسٽ ڪيل فرم/ سپلائرز جون آچون شور هيٺ نه اينديون.

Chairman  
Central Purchase Committee  
LUMHS Jamshoro

**Eliminate Corruption  
Live with Honour**

PIID (H) 100833/2018

**LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES**  
JAMSHORO, SINDH-PAKISTAN

Tel: (022) 921 3350, 921 3313 (Ext 122) Fax: (022) 921-3306  
Email: storesectionlumhs@yahoo.com Web: www.lumhs.edu.pk

**تینڈر کھراڻن لاءِ نوٽيشن**

No. LUMHS/PSS/3097 April 30, 2018

Tender invited under Sealed Cover from authorized Dealers / Distributors registered with GST & Income Tax for purchase & supply of Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras for various Departments at LUMHS, Jamshoro, Category B: Office Appliances, Furniture, Lab. Equipments, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors for Institute of Physiotherapy & Rehabilitation Sciences, LUMHS, Jamshoro Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture for Institute of Biomedical Engineering & Technology, LUMHS, Jamshoro.

DESCRIPTIONS		
Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face-Finger-Print Devices, Closed Circuit Television (CCTV) with Cameras		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
Category B: Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture		
Method of Procurement: Single Stage-Two Envelopes Bidding Procedure Tender Fee (Non-Refundable): Rs. 3,000/-		
TENDER DOCUMENTS PURCHASING FROM	LAST DATE/TIME FOR TENDER PURCHASING	LAST DATE/TIME FOR TENDER SUBMISSION
THU 17.05.2018 During Office Hours	FRI 01.06.2018 up to 10:00 am	MON 04.06.2018 up to 1:00 am
TENDER OPENING OF CATEGORY-A	TENDER OPENING OF CATEGORY-B	TENDER OPENING OF CATEGORY-C
MON 04.06.2018 at 11:30 am	MON 04.06.2018 at 12:30 Noon	MON 04.06.2018 at 01:30 pm

نوٽ: تفصيل ٽينڊر فارم ۾ شامل آهن.

مجوزہ ٽينڊر فارم شرطن ۽ ضابطن سان گڏ SPPRA جي ويب سائٽ: [www.pprasindh.gov.pk](http://www.pprasindh.gov.pk) جي ويب سائٽ: [www.lumhs.edu.pk](http://www.lumhs.edu.pk) تان ڊائون لوڊ ڪري سگهجن ٿا. ڪئٽيگري-A لاءِ ان جي قيمت مبلغ 3000 ڪئٽيگري B لاءِ مبلغ 3000 ۽ ڪئٽيگري-C لاءِ مبلغ 3000 روپيا بصورت پي آرڊر/ DD (ناقابل واپسي) نالي وائيس چانسلر، لياقت يونيورسٽي آف ميڊيڪل اينڊ هيلٿ سائنس، ڄامشورو، ٽينڊر جي ٽيڪنيڪي تجويزن سان گڏ منسلڪ ڪري هيٺ ڏنل دستاويزن سان گڏ حتمي تاريخ تائين جمع ڪرائيا وڃن.

1. موجوده انٽر ٽيڪس سرٽوئيٽ (NTN)
2. ڪارگر GST رجسٽريشن سرٽيڪيٽ
3. ڪمپني جو تفصيلي پروفائيل
4. بااختيار ڊيلر شپ جو سرٽيڪيٽ

ڪئٽيگري A، B ۽ C لاءِ:

آچون سنگل اسٽيج بن لافان جي طريقيڪار تي هونديون، پهريون لافاني ۽ ٽيڪنيڪي تجويز ۽ ڪئٽيگري-A لاءِ مبلغ 3000، ڪئٽيگري-B لاءِ مبلغ 3000، ڪئٽيگري-C لاءِ مبلغ 3000 روپين جو (DD) پي آرڊر (ناقابل واپسي) هئڻ گهرجي ۽ لافاني تي واضح طور تي ٽيڪنيڪل پريوزول لکيل هجي.

ٻئي لافاني ۾ ڪئٽيگري A، B ۽ C لاءِ پاڪستاني روپن ۾ پري يا سي اينڊ اين جو بنياد تي مالي تجويزون (ريٽس) ۽ آچيل آڱهن جي قيمت جو 5% سوٽي ڏيڻ جي صورت ۾ پي آرڊر/ بينڪ ڊرافٽ (ناڪام واک ڏيندڙ کي قابل واپسي جوڳو) نالي وائيس چانسلر LUMHS، ڄامشورو هئڻ گهرجي ۽ هر لافاني تي واضح طور تي نمائندگي پريوزول لکيل هجي.





# Public Relations Section

## Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan.

Phone No: 92-22-9213308 Ext. 104

Dated: 15 MAY 2018

# NEW DAWN NG

### LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES JAMSHORO, SINDH-PAKISTAN

Tel: (022) 921 3350, 921 3313 (Ext 122) Fax: (022) 921-3306  
Email: storesectionlumhs@yahoo.com Web: www.lumhs.edu.pk

### NOTICE INVITING TENDERS

No. LUMHS/PSS/-3097 April 30, 2018

Tender invited under Sealed Cover from authorized Dealers / Distributors registered with GST & Income Tax for purchase & supply of **Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras** for various Departments at LUMHS, Jamshoro, **Category B: Office Appliances, Furniture, Lab. Equipments, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors** for Institute of Physiotherapy & Rehabilitation Sciences, LUMHS, Jamshoro & **Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture** for Institute of Biomedical Engineering & Technology, LUMHS, Jamshoro.

#### DESCRIPTIONS

**Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras**

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

**Category B: Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors**

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

**Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture**

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

TENDER DOCUMENTS PURCHASING FROM	LAST DATE/TIME FOR TENDER PURCHASING	LAST DATE/TIME FOR TENDER SUBMISSION
THU 17.05.2018 During Office Hours	FRI 01.06.2018 up to 10:00 am	MON 04.06.2018 up to 11:00 am
TENDER OPENING OF CATEGORY-A	TENDER OPENING OF CATEGORY-B	TENDER OPENING OF CATEGORY-C
MON 04.06.2018 at 11:30 am	MON 04.06.2018 at 12:30 Noon	MON 04.06.2018 at 01:30 pm

(Note: Details are mentioned in the Tender Documents)

Prescribed Tender Proforma along with Terms & Conditions can be downloaded from SPPRA Website i.e. [www.pprasindh.gov.pk](http://www.pprasindh.gov.pk) / LUMHS Website i.e. [www.lumhs.edu.pk](http://www.lumhs.edu.pk) on Payment of Rs. 3,000/= (Rupees Three Thousand only) for Category-A, Rs. 3,000/= (Rupees Three Thousand only) for Category-B and Rs. 3,000/= (Rupees Three Thousand only) for Category-C in the shape of Pay Order / D.D. (Non-refundable) in favour of Vice-Chancellor, Liaquat University of Medical & Health Sciences, Jamshoro to be attached with Technical Tender Proposal & to be submitted within Due Date along with following Documents.

1. Latest Income Tax Certificate (NTN)
2. Valid GST Registration Certificate
3. Detailed Portfolio of Company
4. Certified Copy of Authorized Dealership Certificate

FOR CATEGORIES A, B & C: The Bidding shall be on Single Stage Two Envelopes procedure. First Envelope should contain Technical Proposal and DD/Pay Order (Non Refundable) of Rs. 3,000/= for Category-A, Rs. 3,000/= for Category-B and Rs. 3,000/= for Category-C & be clearly marked as TECHNICAL PROPOSAL.

Second Envelope should contain Financial Proposal (Rates) for Category A, B & C in Pak Rupees or C&F Basis, along

Hyderabad / Karachi

Tender Documents can also be purchased from Purchase & Store Section, LUMHS, Jamshoro from THURSDAY, 17.05.2018 to FRIDAY, 01.06.2018 during Office Hours.

All Categories (A, B & C) Tenders should be dropped in the Tender Box on Monday, 04th June 2018 before 11:00 am while the Technical Proposals of the Bids shall be opened publicly on Same Day in the presence of Bidders or their nominated Representative, who wish to attend for Category A at 11:30 am, Category B at 12:30 pm & Category C at 01:30 pm.

After the evaluation & approval of the Technical Proposals by the Technical Committee on the basis of the Documents Drawings, Feature of the Equipment / Machines, Samples of described items in the Catalogue and Instrumentations, the LUMHS shall at a time within the Bid Validity of minimum of 90 Days publicly, open the Financial Proposals of the Technically accepted Bids only, on the Date and Time to be communicated later by this University to the Technically approved Bidders. The Financial Proposals of Bids found technically non-acceptable shall be returned without opening Financial Proposals to the respective Bidders.

The Central Purchase Committee may cancel / delete any item as per SPPRA Rules. Tender/s which do not fulfil the Terms and Conditions, will not be entertained. The Procuring Agency may reject all or any Bid subject to the relevant provisions of SPPRA Rules.

Government notified Black Listed Firms / Suppliers shall not be entertained.

In case the Tenders are not opened on the Scheduled Date due to Unscheduled Holiday then the same shall be submitted & opened on Next Working Day. The other Terms and Conditions of the Tender shall however remain unchanged.

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Live with Honour**

Chairman  
Central Purchase Committee  
LUMHS- Jamshoro

PID (H)100833/2018



# Public Relations Section

Liaquat University of Medical & Health Sciences,  
Jamshoro, Sindh, Pakistan.

Phone No: 92-22-9213308 Ext. 104

16 MAY 2018

Dated: \_\_\_\_\_

## NEWS CLIPPING

The Daily ..... اربع 16 مئي 2018ع

derabad / Karachi

ڪٽيگري A، B ۽ C لاءِ:

اچون سنگل اسٽيج بن لفافن جي طريقيڪار تي هونديون. پهرين لفافن ۾ ٽيڪنيڪي تجويز ۽ ڪٽيگري -A لاءِ مبلغ 3000، ڪٽيگري -B لاءِ مبلغ 3000، ڪٽيگري -C لاءِ مبلغ 3000 روپين جو DD/ بي آرڊر (ناقابل واپسي) هئڻ گهرجي ۽ لفافن تي واضح طور تي ٽيڪنيڪل پروپوزل لکيل هجي.

ٻئي لفافن ۾ ڪٽيگري A، B ۽ C لاءِ پاڪستاني روپين ۾ يا سي اينڊ آيف جي بنياد تي مالي تجويزون (ريس) ۽ ايجل اگن جي قيمت جو 5% سوتڙي رقم جي صورت ۾ بي آرڊر / بينڪ ڊرافٽ (ناڪامر واک ڏيندڙ کي قابل واپسي جوڳو) نالي وائيس چانسلر LUMHS، جامشورو هئڻ گهرجي ۽ هن لفافن تي واضح طور تي فنانشل پروپوزل لکيل هجي.

ٻنهي لفافن کي الڳ الڳ مهيند ڪري انهن کي هڪ ٽئين لفافن ۾ رکيو وڃي ۽ سمورن لفافن تي واک ڏيندڙ جو نالو واضح طور تي لکيل هجي.

ٽينڊر فارم LUMHS، جامشورو جي پريزيڊنٽ سيڪشن مان به آفيس وقت دوران حميس ڏينهن 17 مئي، 2018 کان جمع 01 جون، 2018 تائين خريد ڪري سگهجن ٿا.

سموري ڪٽيگري (A، B ۽ C) جون اچون سومر 04 جون، 2018 صبح 11:00 وڳي تائين ٽينڊر باڪس ۾ وقتا وڃن. ٽينڊرن جون ٽيڪنيڪي تجويزون هن موقعي تي موجود رهڻ وارا خواهشمند واک ڏيندڙ يا ان جي مجاز نمائندن جي موجودگيءَ ۾ ڪٽيگري -A کي صبح 11:30 وڳي، ڪٽيگري -B کي منجهند 12:30 وڳي ۽ ڪٽيگري -C کي ٻيپري 1:30 وڳي کوليا ويندا.

ٽيڪنيڪل ڪمپني طرفان دستاويزاٽ، ڊرائنگس، ايڪيوپمينٽس مشينري جا فرنيچرز، نمونن، ڪيٽالاگ ۾ ذڪر ڪيل تصريحات ۽ انسٽرومينٽس جي تفصيلي جائزي ۽ چنڊچاڻ کان پوءِ LUMHS اچن جو موٽر رهڻ جو مدو (گهٽ ۾ گهٽ 90 ڏينهن) جي اندر ٽيڪنيڪي طور تي ڪامياب قرار ڏنل واک ڏيندڙ جن مالي تجويزون کوليندي جنهن جي تاريخ ۽ وقت جي باري ۾ ٽيڪنيڪي طور تي ڪامياب قرار ڏنل واک ڏيندڙن کي آگاه ڪيو ويندو. ٽيڪنيڪي طور تي ناڪامر هئڻ واري اچن جي مالي تجويزون بنا کولڻ جي واسطيدار واک ڏيندڙن کي واپس ڪئي ويندي.

سينٽرل پريزيڊنٽ ڪميٽي ايس پي آري جي قانون مطابق ڪنهن به ائشمر کي رد / Delete ڪري سگهي ٿي.

شرطن ۽ ضابطن تي پورو نه لهندڙ ٽينڊر غور هيٺ نه ايندا، پروڪيورنگ ايجنسي ڪنهن به سمورن اچن کي رد ڪري سگهي ٿي.

حڪومت طرفان بليڪ لسٽ ڪيل فرمن / سپلائرز جون اچون غور هيٺ ناهينديون.

Chairman  
Central Purchase Committee  
LUMHS- Jamshoro

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PID (H) 10083/2018



## LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES JAMSHORO, SINDH-PAKISTAN

Tel: (022) 921 3350, 921 3313 (Ext 122) Fax: (022) 921-3306  
Email: storesectionlumhs@yahoo.com Web: www.lumhs.edu.pk

### ٽينڊر گهرائڻ لاءِ نوٽيس

No. LUMHS/PSS/3097

April 30, 2018

Tender invited under Sealed Cover from authorized Dealers / Distributors registered with GST & Income Tax for purchase & supply of Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras for various Departments at LUMHS, Jamshoro, Category B: Office Appliances, Furniture, Lab. Equipments, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors for Institute of Physiotherapy & Rehabilitation Sciences, LUMHS, Jamshoro Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture for Institute of Biomedical Engineering & Technology, LUMHS, Jamshoro.

#### DESCRIPTIONS

Category A: Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with Cameras

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

Category B: Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multimedia Projectors

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

Category C: Lab, Equipments, Computers, UPS, Furniture & Fixture

Method of Procurement: Single Stage-Two Envelopes Bidding Procedure  
Tender Fee (Non-Refundable): Rs. 3,000/-

TENDER DOCUMENTS PURCHASING FROM	LAST DATE/TIME FOR TENDER PURCHASING	LAST DATE/TIME FOR TENDER SUBMISSION
THU 17.06.2018 During Office Hours	FRI 01.06.2018 up to 10:00 am	MON 04.06.2018 up to 11:00 am
TENDER OPENING OF CATEGORY-A	TENDER OPENING OF CATEGORY-B	TENDER OPENING OF CATEGORY-C
MON 04.06.2018 at 11:30 am	MON 04.06.2018 at 12:30 Noon	MON 04.06.2018 at 01:30 pm

نوٽ: تفصيل ٽينڊر فارم ۾ شامل آهن.

مجوزہ ٽينڊر فارم شرطن ۽ ضابطن سان گڏ SPPRA جي ويب سائيٽ:

www.lumhs.edu.pk تان ڊائون لوڊ ڪري سگهجن ٿا. ڪٽيگري -A لاءِ ان

جي قيمت مبلغ 3000 ڪٽيگري B لاءِ مبلغ 3000 ۽ ڪٽيگري -C لاءِ مبلغ

3000 روپيا بصورت ۾ آرڊر / DD (ناقابل واپسي) نالي وائيس چانسلر، لياقت

يونورسٽي آف ميڊيڪل اينڊ هيلٿ سائنس، جامشورو، ٽينڊر جي ٽيڪنيڪي

تجويزن سان گڏ منسلڪ ڪري هيٺ ڏنل دستاويزن سان، گڏ حتمي تاريخ تائين

جمع ڪرائيا وڃن.

1. موجوده انڪر ٽيڪس سرٽيفڪيٽ (NTN)
2. ڪارگر GST رجسٽريشن سرٽيفڪيٽ
3. ڪمپني جو تفصيلي پروفائل
4. بالاختيار ڊيلر شپ جو سرٽيفڪيٽ



Purchase & Store Section

# Liaquat University

Of Medical & Health Sciences, Jamshoro.

Website: [www.lumhs.edu.pk](http://www.lumhs.edu.pk)

Email: [storesectionlumhs@yahoo.com](mailto:storesectionlumhs@yahoo.com)

Phone No. 022-9213350

Phone No. 022-9213350

Exch: 022-9213308, Ext. 122

Issued to: P.O. No. \_\_\_\_\_

Dated: \_\_\_\_\_

Rs. 3,000/= (Rupees Three Thousand only) for each Category

**Tender for Purchase, Supply & installation of Category A. Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras, at LUMHS Jamshoro. Category B. Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multi Media Projectors, for Institute of Physiotherapy, LUMHS Jamshoro & Category C. Lab equipment, Computers, UPS, Furniture & Fixture for Institute of Bio Medical Engineering & Technology LUMHS Jamshoro.**

## **Terms & Conditions/instructions to Bidders**

- a. Tenders are invited under sealed cover from authorized Firms/Dealers registered with GST, Income Tax for Purchase & Supply of Category A. Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras, at LUMHS jamshoro. Category B. Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multi Media Projectors, for Institute of Physiotherapy, LUMHS Jamshoro. & Category C. Lab equipment, Computers, UPS, Furniture & Fixture for Institute of Bio Medical Engineering & Technology LUMHS Jamshoro.

Data sheet containing information about the assignment is given on page No 3 to 5 For Category A page, No. 6 to 16 for Category B On page No. 17 to 40 for Category C

- b. Prescribed tender Proforma along with terms & conditions which can be downloaded from SPPRA website i.e. [www.pprasindh.gov.pk](http://www.pprasindh.gov.pk) / LUMHS website i.e. [www.lumhs.edu.pk](http://www.lumhs.edu.pk) on payment of Rs. 3,000/= (Rupees Three Thousand Only) for each Category in the shape of Pay Order / D.D (Non-refundable) in favor of Vice-Chancellor, Liaquat University of Medical & Health Sciences, Jamshoro (Separate for each category) attached with technical tender Proposal form within Due Date along with following documents.

1. Latest Income Tax Certificate (NTN).
2. Valid GST Registration Certificate, with last GST return.
3. Detailed Portfolio of Company.
4. Certified copy of Authorized Sole Agent / Distributor.
5. Last 3 Years audit report.
6. Clearly mention the country of origin and manufacturer
7. Country of origin and port of shipment must be same.

- c. Payment will be made on availability of funds, if delayed due to any reason no extra interest / mark-up will be accepted / paid.
- d. Tender can be downloaded / purchased from Purchase & Store Section, LUMHS, Jamshoro from Thursday 17<sup>th</sup> May 2018 during Office hours.
- e. The Tender should be dropped in the tender box on 20<sup>th</sup> June 2018 before 11:00 am Proposals of the bids shall be opened publicly on same day in the presence of bidders or their nominated representative, who wish to attend Category A at 11:30 am, Category B at 12:30 pm, Category C, at 1:30 pm,
- f. Method of Procurement used:
- g. The bidding shall be on single stage two envelope procedure, 1<sup>st</sup> envelope should contain Technical Proposals DD/Pay order Rs. 3,000/= (Rupees Three Thousand Only) for each Category in favor of Vice Chancellor LUMHS (Non Refundable) & be clearly marked as technical proposals.
- h. Second envelope should contain Financial Proposals (rates) each Category in Pak rupees/C&F basis along with the Bid Money/Earnest 5% of quoted rates each category in the shape of pay order/demand draft in favor of Vice Chancellor LUMHS (refundable to un-successful bidders) the envelope be clearly marked as financial proposals.
- i. Both envelopes should be sealed separately and placed in the third envelope. The name of the bidder be clearly marked on all envelopes.
- j. The firms should provide Catalogues, Broachers/ samples required papers of the required Equipment/ Items with Technical Tender Bid and also give the details of technical staff; workshop and previous experience (certificate of at least 3years experience).
- k. The supplier will have to produce evidence in respect of their registration with income Tax, Sales Tax Department.
- l. Income tax / GST deductible as per Government Rules applicable.
- m. The currency in which tender price is to be assessed and computed is Pak Rupees.
- n. Government notified black listed firms / suppliers shall not be entertained. All terms and conditions of bids will be accepted by representative of firm.
- o. The Central Purchase Committee may cancel / delete any item as per SPPRA Rules. Tender who do not fulfill the terms and conditions will not be entertained. The procuring agency may reject all or any bid subject to the relevant provisions of SPPRA Rules.  
Abide my self of the terms and Condition

Name of Firms & Signature

With Stamp

**Prof. Ikram Din Ujjan,**  
Chairman  
Central Purchase Committee,  
LUMHS, Jamshoro.

<b><u>Companys' Basic Evaluation</u></b>		
<b><u>Criteria</u></b>		
Contractor / (s) / Firm /(s) / Distributor / (s) / Supplier / (s) must obtained minimum 70% points in below mentioned eligibility criteria to qualify for Financial Bid Opening without declaration of black listing by relevant council(enclose valid / renewal registration certificate).		
<b>Description</b>	<b>Total Marks</b>	<b>Company Name</b>
		<b>Obtained Marks</b>
NTN Certificate	<b>5</b>	
General Sales Tax Registration Certificate (GST)	<b>5</b>	
Company Profile containing Introduction date of establishment, experience (National / International Level) details of supplies to various Institutions / International Level including number of supplied equipments	<b>5</b>	
Professional Experience of Technical Staff as per required / relevant education regarding installation / repairing / service of equipments	<b>5</b>	
Current Financial Position (Bank statements & Audit Reports)	<b>10</b>	
Availability of Service Centre / (s) Provincial and National Level	<b>5</b>	
Certificate of Authorized Equipment Manufactures / Distributors / Suppliers	<b>10</b>	
<b>Sub Total Marks</b>	<b>45</b>	
<b><u>Equipment Technical Evaluation Criteria</u></b>		
<b><u>(Item wise)</u></b>		
Conformance to the Specification	<b>25</b>	
Similar nature works Experience	<b>30</b>	
Sample Evaluation	<b>0</b>	
<b>Sub Total Marks</b>	<b>55</b>	
<b>Grand Total Marks</b>	<b>100</b>	

**Note: The minimum 70 marks are required to qualify for financial opening.**

## Specifications: -

### **Category A. Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras for various Departments at LUMHS, Jamshoro.**

S.No.	Name Of Item	Quantity	@ Rate	Amount
01.	<p><b><u>Hand Held Metal Detector.</u></b></p> <ul style="list-style-type: none"> <li>● Compact, Elegant, Robust and Ergonomic</li> <li>● Uniform Detection of Magnetic and Non-Magnetic Targets</li> <li>● Full Digital Design: Consistent Performance and Calibration-Free Operations</li> <li>● Extended Continuous Operation Time</li> <li>● Advanced Configuration Capability</li> <li>● Indoor and Outdoor Operations</li> </ul> <p style="text-align: center;"><b>Time Attendance System (USA, Korea, UK, Japan, Europe)</b></p>	22 Nos.		
02.	<p><b><u>Walk Through Metal Detector Gate</u></b></p> <ul style="list-style-type: none"> <li>• Quick, accurate analysis of all parts of the body People in transit, from the shoe level to the crossbar</li> <li>• Very accurate pinpointing of individual and multiple metal targets</li> <li>• All full-height light bar displays the locations of the detected metal masses in transit. This results in rapid identifications of threats and reduction or elimination of the need for manual searches</li> <li>• Built in programs to screen visitors and staff for Weapons and contraband.</li> </ul> <p><b><u>High Discrimination</u></b></p> <ul style="list-style-type: none"> <li>• Compliant with and Certified to the Strictest Standards for Airport Security screening</li> </ul> <p><b><u>Features:</u></b></p> <ul style="list-style-type: none"> <li>• Accurate pinpointing of individual and multiple metal targets</li> <li>• Exceptional immunity to external interferences</li> <li>• Unmatched Reliability</li> </ul> <p><b><u>Unique Alarm Singnaling</u></b></p> <ul style="list-style-type: none"> <li>• Multi-Zone display Bars, each programmable as entry Stop/Go and / or local alarm indication</li> </ul> <p><b><u>Flexible Acoustic Alarm Signaling System</u></b></p> <ul style="list-style-type: none"> <li>• 10 Continues and Pulsed Tones</li> <li>• 34 special sounds</li> </ul> <p><b><u>10 Acoustic Intensity Levels</u></b></p> <p>A complete acoustic alarm systems allows personalization Of the alarm tones and intensities, with a wide choices of Continues, pulsed and special tones at different levels of Intensity. The Wide volume control dynamic allows Operation even in very noisy environments.</p> <p style="text-align: center;"><b>Time Attendance System (USA, Korea, UK, Japan, Europe)</b></p>	22 Nos.		

03. a)	<p><b><u>Face Recognition&amp; Fingerprint</u></b></p> <p><b><u>Biometric Face Finger Print Devices</u></b>  <b><u>Identification Standalone Controller Device with one year parts&amp; maintenance warranty.</u></b>  Face Detection and Identification.  Live Finger Detection (LFD) based with advance Techniques  High-precision optical sensor.Fingerprint Scanning Technology to read Wet &amp; Dry fingers  Built-in TCP/IP, {WiFi (Optional)}  5000 Face Registration Capacity or Higher  20,000 Fingerprint Registration Capacity or Higher  Must have high speed 1.0 GHz Quad Core CPU or Higher  Memory at least 1GB Flash or Higher + 256/512 MB RAM or Higher  4.3 inch/Higher High Resolution Touch Screen Color LCD  USB Memory slot easy data transfer to PC  Battery based Power Back if available  Built-in Software for Reporting  Advanced Security Time Schedule Configuration</p>	40 Nos.		
b)	<p><b>Protection Box</b>  Machine Protection Box in Acrylic  Aesthetic Design/ better to protect machine from tempering</p>	40 Nos.		
c)	<p><b>Supply &amp; Installation with all respect</b> i-e UTP, Power Cable(laying), Channeling, drilling etc. with integration, Interfacing, Commissioning, put into operation &amp; Training at Jamshoro  <b>Time Attendance System (USA, Korea,UK, Japan, Europe)</b></p>	Job		
<b><u>Optional</u></b>				
a)	<p><b>Power Backup Module:</b>  Heavy Duty Dry Battery based Power Back up module that must give minimum 8 hours backup</p>	40 Nos.		
b)	<p>Customize Software for comprehensive Reporting with SMS Alert</p>	01		
c)	<p><b>Extra Two year maintenance and warranty with faulty parts replacement</b>    (USA, Korea, UK, Japan, Europe)</p>	Job		

04.	<p><b>Closed Circuit Television (CCTV) with Cameras,</b>          Fix Camera 4MP/4K          Full HD network          Network Video Recorder 32 CH          HDD 4TB          40" LED Full HD          HDMI          Supply &amp; Installation of UTP with          Related accessories (RFT)          UPS Stabimatic          Commissioning &amp; Installation of IP cameras &amp; NVR          With receiving Unit@ Control Room          Pole for CCTV &amp; LED light, with          system          50 watt Solar Unit with AH battery+ Inverter          (USA, UK, Japan, Europe)</p>	<b>20 Nos.</b>		
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cat B

S.No	DESCRIPTION	QTY.		
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### Specification of Peads Rehabilitation Equipemnts.

1	<b>Wall Ladder, simple model</b>	1 No.
2	<b>Monkey Bar Wooden</b> Wooden Shoulder finger Ladder Local	1 No.
3	<b>Board and whole board.</b> 1.5x1.5 ft prefererably multiple shapes wholes/multicolored. Local	1 No.
4	<b>Gym Kit Board</b> Laminiated exercise board with storage drawer have several holes to fix pegs and springs. Comes one finger disc, one roller, three springs loaded knobs, 3 aluminum pegs and 3 sets of springs of different tensions. The unit permits active & passive flexion & exercise of fingers & grip.  Local	1 No.
5	<b>Wavy Tactile Patway</b> Set of 8 lengths makes maximum of 5 meter track with Local	1 No.
6	<b>Cerebral Palsy Standing Frames.</b> 4ft height with adjustable knee support and table Local	1 No.
7	<b>Bolsters Set.</b> Premium molded roles with size 1. 10" elevation x 48"length size 2. 14" elevation x 48" length.	1 No.
8	<b>Therapy Floor Mats</b> Exerices mats 6 into 12 ft Airex 'Corona' 185x100x1,5 cm, 3.8 kg, red	2 Nos.
9	<b>Wedges Set</b> Wedge shaped cushion, dia. 50x40x12cm	4 Nos.
10	<b>Cerebral Palsy Chair</b> 14" x 14" fully padded.	1 No.
11	<b>Parallel Bar</b>	1 No.

3x10ft length

Local

- |    |   |        |
|----|---|--------|
| 12 | <b>Stationary Cycle.</b><br>Adjustable seats / heights to fit child's requirements, resistance tension control.<br>Local  | 1 No.  |
| 13 | <b>Hurdles</b> 3x3 ft wooden base with soft foam & imported raxine cover<br>Local   | 1 No.  |
| 14 | <b>Correction Mirror</b><br>3 mirror set in frame, united with each other with wheels.<br>Local   | 1 No.  |
| 15 | <b>Balance Board</b><br>Balance board, grey, dim. 150x60x17 cm  | 1 No.  |
| 16 | <b>Hydraulic Stool</b><br>Adjustable heights with hydraulic control & lock mechanism<br>Local   | 2 Nos. |
| 17 | <b>Bean Bags Set</b><br>Small & medium sizes<br>Local   | 1 No.  |
| 18 | <b>Sensory kit</b> whole kit<br>Local   | 1 No.  |
| 19 | <b>Walking Frames</b><br>Adjustable size chromed<br>Local   | 1 No.  |
| 20 | <b>Quadripod Gai Trander</b><br>Quadriceps bench (grey) incl. 1<br>Dimensions : 127 x 70 x 90 cm. (HxWxD)<br>Weight : 30 kg. (excl. weight discs)<br>Maximum patient weight : 135 kg.<br>Angular adjustability of the<br>Range of Motion limiters : 0° to 360° in steps of 20°<br>Lever arm adjustment : from 15 to 45 cm.<br>Angular adjustability of the lever arm : 0° to 360° in steps of 20°<br>Weight discs : 10 x 0,5 kg, 1 x 5 kg | 1 No.  |

- |    |   |       |
|----|---|-------|
| 21 | <b>Sensory Board 3x4 ft with sensory objects of activities of daily livings.</b><br>Local   | 1 No. |
| 22 | <b>Tilt Table Small</b><br>2-section, head-section, hydraulic H/L<br>Size tabletop (lxw): 200x67 cm (optional 57 or 80 cm width on models 311, 321, 312 and 322)<br>Height adjustment: 45-95 cm<br>Lifting time (min.-max.): approximately 25 sec.<br>Lifting capacity: 150 kg<br>Force electrical motor: 6.000 N<br>Power supply: 100 / 120 / 230V AC 50/60 Hz<br>Current consumption: 1.0 A max.<br>Moisture resistance: according IP 44<br>Force hydraulic pump: 10.000 N<br>Upholstery: Gray colors | 1 No. |

<b>Equipemnt of Kinesiology &amp; Biomechanics Labs.</b>
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- |   |   |        |
|---|---|--------|
| 1 | <b>Goniometer</b><br>Prestige Medical 12" Protactor Goniometer 360 degre<br>Local | 1 No.  |
|   | <b>OB Goniometer</b><br>Local   | 1 No.  |
|   | <b>Finger Goniometer</b><br>Local   | 1 No.  |
|   | <b>Wrist Goniometer</b><br>Local  | 1 No.  |
|   | <b>Large Joint Goniometer</b><br>Local  | 1 No.  |
| 2 | <b>Posture Assessment Grid</b><br>Grid Size 7ft x 4ft.<br>Local                   | 2 Nos. |
| 3 | <b>Hand Grip Dynamometer</b><br>Standard<br>Local                                 | 2 Nos. |
| 4 | <b>Inclinometer</b><br>Standard   | 2 Nos. |

Local

**5 Electronic Weight Scale 2 Nos.**

Standard  
Local

**6 Traction Table and Unit 1 No.**

Form of therapy: Static, Intermittent, Pro- and Regressive,  
Cyclic

Traction force: 15 - 900 N / 1.5 - 90 kg / 3.4 - 202 Lbs

Traction force / base force hold time: 1 sec. - 1 hour (1 sec. intervals)

Repeats (intermittent and cyclic): 1 - 100

Steps hold time (pro- and regressive): 1 sec.- 5 min. (1 sec. intervals)

Steps (pro- and regressive): 1 - 25

Speed (change of traction force): 1 - 50 N/sec. (1 N intervals)

0.1 - 5.0 kg/sec.

0.2 - 11.2 Lbs/sec.

Treatment time: 1 sec. - 150 min.

Programmable favorites: 100+

Sequential programming: Yes (up to 5 forms of therapy)

Safety control for traction force above: 200 N / 20 kg / 45.2 Lbs

Touch screen: 4.3 inch, full colour, capacitive

Mains voltage: 100 - 240 V (50/60 Hz)

**Standard accessories**

Nylon cord 170 cm with carabine hook

Fixing knobs, set of 4

Patient stop switch

Mains cable 230V - EUR

Operating manual (CD-rom)

Information booklet

Manumed Special Traction 2-section, back, fixed height (type  
004) 1

Thoracic belt 1

Pelvic belt 1

Clamp for fitting fixation straps 2

Padded neck harness, complete with spreader bar 1

Traction frame Manumed Special Traction 3450500 (width  
480mm) 1

Flexistool, with separate height adjustment for each leg 1

Saunders clinical traction unit including mounting bracket.  
1

**7 Crutches, Stick and Frame Wheel Chair 1 No.**

One each

Adjustable, Local

**8 Couch / Treatment Table** **1 No.**  
 Size tabletop (lxw): 201x67 cm  
 Size tabletop (lxw): 198x67 cm  
 Height adjustment: 45-95 cm  
 Lifting time (min.-max.): approximately 25 sec.  
 Lifting capacity: 150 kg  
 Force hydraulic pump: 10.000 N  
 Force electrical motor: 6.000 N  
 Power supply: 100/120/230V AC 50/60 Hz  
 Current consumption: 1.0 A max.  
 Moisture resistance: according IP 44

**9 Trampoline** **1 No.**  
 Medium Size  
 Adjustable, Local

**Equipemnt of Therapeutic Exercise and Manual Therapy Labs.**

**1 Massage Table** **1 No.**  
 Standard  
 Local

**2 Balance Board** **1 No.**  
 Balance board, grey, dim. 150x60x17 cm

**3 Wobble Boards** **1 No.**  
 Standard  
 Local

**4 Exercise Therapy Mat** **2 Nos.**  
 Airex 'Coronella' 185x60x1,5 cm, 2.2 kg, red mattress

**5 Blaster and Wedges** **1 No.**  
 Standard  
 Local

**6 Transfer Boards** **2 Nos.**  
 Standard  
 Local

**7 Transfer Belt** **2 Nos.**  
 Standard  
 Local

**8 Tread Mill** **1 No.**  
 Permitted voltage deviation : 10%  
 Drive : DC motor, 3.5 Hp  
 Motor power : 2600 W

Max. current consumption : 10 A  
 Fuses : 2 x 10 A (T)  
 Min./max. speed: 0,4 – 18 km/hr (in steps of 0.1 km/h)  
 Max. speed in Autospeed mode : adjustable up to 18 km/h  
 Positive angle of inclination: 0% to +15% (in steps of 0.5%)  
 Negative angle of inclination: 0% to -10% (in steps of 0.5%)  
 Max permissible client weight on running surface : 235 kg  
 Step-up height : 12,5 cm ("Standard" and "Plus" type)  
 Effective walking surface : 150 x 50 cm  
 Dimensions : 212x86 x 148 cm (LxWxH); height incl. console

- |           |  |                |
|-----------|--|----------------|
| <b>9</b>  | <b>Manual Therapy Belt</b><br>Standard<br>Local  | <b>2 Nos.</b>  |
| <b>10</b> | <b>Hydraulic Stool</b><br>Adjustable heights with hydraulic control &<br>lock mechanism<br>Local | <b>20 Nos.</b> |

<b>Equipemnt of Physical Agents Electro Labs.</b>
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- |          |  |              |
|----------|--|--------------|
| <b>1</b> | <b>Ultra Sound</b><br>Ultrasound frequencies 1-3 MHz<br>Ultrasound continuous and pulsed<br>Duty cycles 5, 10, 20, 33, 50, 80%<br>Pulse frequency 16 Hz, 48 Hz en 100 Hz<br>Intensity 0-2 W/cm2 continuous ,<br>0-3 W/cm2 pulsed(1)<br>ERA US applicator large 5 cm2<br>Pre-programmed treatment suggestions 25 - Evidence Based<br>Programmable positions 1000+ | <b>1 No.</b> |
|----------|--|--------------|

**Standard Accessories:**

- |                                     |    |
|-------------------------------------|----|
| Contact-gel, bottle 250 ml, 1 piece | 1x |
| Mains cable                         | 1x |
| Device base (inclination support)   | 1x |
| Operating manual (CD rom)           | 1x |
| Installation guide                  | 1x |

- |          |   |  |
|----------|---|--|
| <b>2</b> | <b>Stimulator</b><br>Power supply 100 – 240 V ± 10% / 50 / 60 Hz<br>Dimensions (WxDxH)<br>Device 24 x 32 x 12 cm<br>Strap 250x3 cm<br>Strap 100x3 cm<br>Rubber electrodes 6x8 cm, 2 mm female, set of 2<br>Moist pads for rubber electrode 6x8 cm, set of 4 | <b>1 No.</b><br><br><br><br><br>1x<br>1x<br>2x<br>1x |
|----------|---|--|

Patient cable, black, 2core with 2mm male plugs & coloured clips	2x
Mains cable	1x
Device base (inclination support)	1x
Operating manual (CD rom)	1x
Installation guide	1x

**3 Shortwave Diathermy** **1 No.**

Unit for continuous and pulsed shortwave therapy

The continuously adjustable intensity and the output of 400 Watt provide optimum application possibilities. Continuous shortwave therapy increases the circulation and stimulates the metabolism. The pulsed peak power can be set to a maximum of 1000 Watts. The related average power is, however, much lower.

Biological processes, which should not be heat-treated, can therefore be treated a-thermally.

Besides the well known effects of heat therapy with continuous radiation, the unit's pulsed mode will stimulate wound healing, oedema and haematoma absorption, pain reduction and stimulation of the peripheral circulation

Four large wheels make the Curapuls 970 easy to move within your practice. Two wheels can be locked to immobilise the unit.

- Continuous and pulsed
- Conveniently arranged display
- Wide range of electrodes
- Four large castors
- Adjustable electrode arms

**Technical Specifications:**

Generator frequency: 27.12 MHz,  $\pm 0.6\%$

Output power: continuous HF max. 400 W, pulsed HF max. 1000 W (peak)

Pulse duration: ca. 400  $\mu$ s

Pulse repetition frequency: 15-200 Hz adjustable in 10 steps

Mains supply: 230-240 V / 50 Hz

Mains voltage variation: approx.  $\pm 10\%$

Current consumption: approx. 6 A (at 230 V)

(wxdxh, without arms): 56x43x92.5 cm

Length electrode arms: 93 cm

**4 TENS** **2 Nos.**

Number of channels: 2 (non-independent)

Constant current: up to a resistance of 1000 ohm

Stimulation current/channel: 0-99,5 mA

Waveform: symmetrical biphasic pulse, 100% compensated

Number of preset programs: 28  
Number of custom programs: 5 (PP1-PP5)  
Stimulation forms: Conventional, Burst, Modulated frequency/pulse duration, Mixed frequency, Alternated modulated pulse duration, Intermittent  
Max pulse duration: 400  $\mu$ s  
Max frequency: 120 Hz  
Timer 1 to 99 min./Off  
Power source: 2x1.5 V AA non-rechargeable or 2x1.2 V AA rechargeable batteries

**5 Interferential Unit 1 No.**

2-Pole interferential, available over 2 channels  
Tetrapolar interferential  
Isoplanary interferential  
Asymmetrical biphasic pulsed current (TENS)  
Burst TENS  
30 pre-programmed treatment suggestions, adjustable and rewritable  
Type mains adapter: ENB-1530  
Mains voltage: 100-240 Volt  $\pm$  10% (50/60Hz)  
Output: 15 VDC/3,4A  
Dimensions (wxhxd): 22x20x20 cm

**6 Infra Red Lamp 2 Nos.**

Powder-coated aluminium / sheet steel housing  
Housing colour: white  
Handle bar colours: red, blue, green, yellow or black  
Electronic timer (treatment time max. 60 min.)  
3 therapeutic IR-lamps (Philips Infrared PAR 38, 150W)  
Each bulb can be switched ON/OFF individually  
Protection grid to avoid burns  
Main switch with power indicator  
Power supply : 220-240V, 50/60Hz  
Number of lamps : 3  
Heating capacity per light bulb : 150 W  
Max. heating capacity : 450 W  
Lamps individually switchable : Yes  
Timer Max. : 60 min  
Device fuses IEC 60127-2/4 DIN VDE 820 : 6,3x32 5 A

**7 Ultra Violet Lamp 2 Nos.**

Lamp with adjustable height stand easily adjustable lamp angulations . Base made of M.S. and rod made of Stainless steel with heavy base & Bulb

**8 Laser 1 No.**

**Mains voltage:** 230 Vac 50-60Hz  $\pm$ 15% 115 Vac 50-60Hz



**Max. Power consumption:** 15 VA  
**Double fuse protection:** 250 mA Rit 5x20 mm  
**Plug for Interlock/safety key**  
 (contacts normally closed)  
**'Backlit LCD Display, to visualize**  
**and control operating parameters:** 6 contact DIN pluggraphic 240x128 pixel  
**Programmable treatment time:** up to 60 minutes  
**Diode Laser Wave length for 25, 100, 400mW pulse diode:** 905 nm  
**Diode Laser Wave length for 500 mW continuous laser diode:** 808 nm  
**Laser classification according to EN-60825-1:** 3 B  
**MPE (Maximum permissible exposure):** 5032.06 J . m <sup>-2</sup>  
**AEL (Accessible emission limit):** 77.1 mW (class 3B limit)  
**Divergence:** 107 mrad  
**NOHD (Nominal ocular hazard area) direct light:** 2.89 meters  
**NOHD diffused light:** 0.00 meter  
**IR radiation sensor for external laserprobe:** On front panel  
**Programmable impulse frequency:** 10-10.000 Hz  
**Duty Cycle, only available with continuous laser diodes:** 10-9900 Hz  
**Independent output channels:** 2  
**Pre-programmed protocols:** 82  
**Free programmable positions:** 50  
**Plastic desktop container-external dimensions (lxhxd):** 29x28x11,5 cm  
**Weight of machine body:** 3 ,2 kg

### Establishment of Cardiopulmonary Lab.

- |          |   |               |
|----------|---|---------------|
| <b>1</b> | <b>Tread Mill</b><br>Permitted voltage deviation : 10%<br>Drive : DC motor, 3.5 Hp<br>Motor power : 2600 W<br>Max. current consumption : 10 A<br>Fuses : 2 x 10 A (T)<br>Min./max. speed: 0,4 – 18 km/hr (in steps of 0.1 km/h)<br>Max. speed in Autospeed mode : adjustable up to 18 km/h<br>Positive angle of inclination: 0% to +15% (in steps of 0.5%)<br>Negative angle of inclination: 0% to -10% (in steps of 0.5%)<br>Max permissible client weight on running surface : 235 kg<br>Step-up height : 12,5 cm ("Standard" and "Plus" type)<br>Effective walking surface : 150 x 50 cm<br>Dimensions : 212x86 x 148 cm (LxWxH); height incl. console | <b>1 No.</b>  |
| <b>6</b> | <b>Electronic weight Scale</b><br>Standard<br>Local   | <b>1 No.</b>  |
| <b>7</b> | <b>Digital Puls Oximeter</b><br>Standard<br>Local   | <b>4 Nos.</b> |

- 8 **Digital Blood Pressure Monitors** 2 Nos.  
Standard  
Local
  
- 9 **Home Gym** 1 No.  
Standard  
Local
  
- 10 **Spirometer** 05 Nos.  
Spirometry and flow volum parameter. Maximum ventilation volume (MVV) insiratory capacity.
  
- 11 **Stethoscope** 5 Nos.  
Standard  
Local
  
- 12 **Precursor** 1 No.  
Motor: 1/40 Horsepower  
Outspeed: 20-50 cycles per second  
Standard  
Local
  
- 13 **Hydraulic Couch** 2 Nos.  
Size tabletop (lxw): 201x67 cm  
Size tabletop (lxw): 198x67 cm  
Height adjustment: 45-95 cm  
Lifting time (min.-max.): approximately 25 sec.  
Lifting capacity: 150 kg  
Force hydraulic pump: 10.000 N  
Force electrical motor: 6.000 N  
Power supply: 100/120/230V AC 50/60 Hz  
Current consumption: 1.0 A max.  
Moisture resistance: according IP 44  
Upholstery: 18 different colours available

**Terms & Conditions:**

PRICE : C&F Karachi by Air & Local

COUNTRY OF ORIGIN: USA, UK, Japan , Europe ,Netherlands

SHIPMENT : Country of origin & port of shipemnt must be same. ✓

15

## Specifications:

### Category B:

<b>INSTITUTE/ OFFICE APPLIANCES/ FURNITURE:</b>			
01.	<b>Rostrum</b> Size 3x3.5 with microphones and speakers	01 Nos.	
02.	<b>Student Chairs</b> Plastic Material with Iron Base Including Iron side rack with writing pad	50 Nos.	
03.	<b>Wooden Stool</b> Height 2 ft x 2 ½ ft bottom width 1ft ½ (square) Top/ upper width 15 inch (square) color polished	08 Nos.	
04.	<b>Computers for classes without LEDs</b> <b>Intel Corei7 with 4BG ram and ITB HDD</b>	03 Nos.	
05.	<b>Computer for office with LED 18.5inch</b> <b>Intel Corei7 with 4BG ram and ITB HDD</b>	01 Nos.	
06.	<b>Multimedia projector</b> 3200 ANSI Lumens/white color out put 10000: 1 Contrast ration XGA Resolution 5000 hours lamp life10000 hrs (Eco Mode) Power saving standby mode less than 0.5 W. 2VGA Port,2HDMI Port, LAN,16 Watt Audio Output, Wi-Fi optional One Year Warranty	04 Nos.	
07.	<b>Projector Screen 10ftx8ft manual project screen (Best Quality)</b>	05 Nos.	
08.	<b>Split Air Conditioner 1:5 ton (Best Quality)</b>	04 Nos.	
09.	<b>Hydraulic Stool (Best Quality)</b>	20 Nos.	
10.	<b>UPS capacity: 1500V/A backup time: 6-30 minutes with 2 PC+2x15? Monitor</b>	10 Nos.	
11.	<b>Photocopier Machine</b> <b>Digital photocopier (heavy duty Machine</b> Digital Photo Copier E-Studio scanner GDI printer with Networking USB scanner zoom system 25x400 auto sleep mondaout energy sever Multi copy 1 to 999 first copy 6.4 seconds A-4 paper capacity 250 sheets, draw 100 sheets bypass maximum original size A-3 print and copy speed 28cpm A-4 size processor 360MHz copy resolution 2400x600 dpi with 2 years free service & warranty, Japan make or equivalent	01 No.	





UK / USA / JAPAN / EU		
6.	<p><b>Thermal conductivity</b></p> <p><b>Determining the thermal conductivity of building materials using the single-plate method</b></p> <p>Calorimetric chamber 1</p> <p>Building materials for calorimetric chamber 1</p> <p>DC-High Current Power Supply 1...32 V/0...20 A 1</p> <p>Sensor-CASSY 2 1</p> <p>CASSY Lab 2 1</p> <p>NiCr-Ni adapter S, Type K 1</p> <p>Temperature probe, NiCr-Ni, 1.5 mm, Type K 2</p> <p>Connecting lead 19 A, 50 cm, black, pair 1</p> <p>Connecting lead 32 A, 100 cm, black 4</p> <p><b>Complete With :-</b></p> <p><b>Determining the thermal conductivity of building materials using the heat flux plate principle</b></p> <p>Calorimetric chamber 1</p> <p>Building materials for calorimetric chamber 1</p> <p>DC-High Current Power Supply 1...32 V/0...20 A 1</p> <p>Sensor-CASSY 2 1</p> <p>CASSY Lab 2 1</p> <p>NiCr-Ni adapter S, Type K 2</p> <p>Temperature probe, NiCr-Ni, 1.5 mm, Type K 3</p> <p>Connecting lead 32 A, 100 cm, black 2</p> <p><b>Complete With :-</b></p> <p><b>Damping temperature fluctuations using multiple-layered walls</b></p> <p>Calorimetric chamber 1</p> <p>Building materials for calorimetric chamber 1</p> <p>DC-High Current Power Supply 1...32 V/0...20 A 1</p> <p>Sensor-CASSY 2 1</p> <p>CASSY Lab 2 1</p> <p>NiCr-Ni adapter S, Type K 2</p> <p>Temperature probe, NiCr-Ni, 1.5 mm, Type K 3</p> <p>Halogen lamp 12 V, 50/100 W 1</p> <p>Halogen bulb 12 V/100 W, G6.35 1</p> <p>Saddle base 1</p> <p>Connecting lead 32 A, 100 cm, black 2</p> <p><b>UK / USA / JAPAN / EU</b></p> <p><b>5 Set</b></p>	5
	7.	<p><b>Human Eye Model Specifications</b></p> <ul style="list-style-type: none"> <li>• Adjustable Focal Length Lens</li> <li>• Set of Lenses</li> <li>• Retina Screen</li> <li>• Pupil Aperture</li> <li>• Foam Lens Holder</li> </ul>

	<ul style="list-style-type: none"> <li>• Human Eye Model Without Lens</li> <li>• Experiment Manual</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	
8.	<b>Interference and Diffraction of light Apparatus</b> <ul style="list-style-type: none"> <li>• Optical Track</li> <li>• Precision Slits</li> <li>• Laser</li> <li>• Aperture Bracket</li> <li>• Linear Translator</li> <li>• High Sensitivity Light Sensor</li> <li>• Rotary Motion Sensor</li> <li>• Experiment Manual</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	4
9.	<b>Universal interface (Pasco)</b> <b>Interface with the following built in features:</b> <ul style="list-style-type: none"> <li>• High speed-analog inputs</li> <li>• Digital inputs (Photogates and other timing devices)</li> <li>• Digital Inputs</li> <li>• USB connection</li> <li>• Power Supply</li> <li>• Function Generator</li> </ul> <b>UK / USA / JAPAN / EU</b>	4
10.	<b>Hook's Law</b> <ul style="list-style-type: none"> <li>• Cart Launcher</li> <li>• 1.2 m Track With Carts</li> <li>• Force Sensor Track Bracket</li> <li>• Elastic Bumper</li> <li>• Spring Kit</li> <li>• Motion Sensor</li> <li>• High Resolution Force Sensor</li> <li>• Experiment Manual</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	5
11.	<b>Projectile Motion</b> <ul style="list-style-type: none"> <li>• Mini Launcher</li> <li>• Time-of-Flight Accessory</li> <li>• Photogate</li> <li>• Phone Jack Extender Cable</li> <li>• Large C Clamp (6 Pack)</li> <li>• Plumb Bobs (10 Pack)</li> <li>• 30 Meter Measuring Tape</li> <li>• Experiment Manual</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul>	5

	<b>UK / USA / JAPAN / EU</b>	
12.	<b>Basic Optics System Specifications</b> <ul style="list-style-type: none"> <li>• 1.2m Optics Track</li> <li>• Basic Optics light Source</li> <li>• Basic Optics Geometric Lens Set</li> <li>• Accessory Lens Set</li> <li>• Concave/Convex Mirror</li> <li>• Adjustable Lens Holder</li> <li>• Ray Optics Kit</li> <li>• Ray Table</li> <li>• Viewing Screen</li> <li>• Ground Glass Lenses</li> <li>• Lens Assortment</li> <li>• Geometric Lens Set</li> <li>• Experiment Manual</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	5
13.	<b>Ideal Gas Law Apparatus</b> <ul style="list-style-type: none"> <li>• Ideal Gas Law Apparatus</li> <li>• Pressure and Temperature Sensor</li> <li>• Experiment Manual</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	02
<b>Electrical / Electronic Lab</b>		
14.	<b>Transistor/diode tester and curve tracer. Specifications</b> The system built in display for curve tracer. The system must be able to check and identify the pin and type of diode and transistors and trace the curve of all Major types of diode and transistors. <b>UK / USA / JAPAN / EU</b>	8
15.	<b>Low Voltage AC/DC Power Supply</b> <b>Output Voltage:</b> 0 to 30 V DC or above <b>Current:</b> From 0 to 12 V, 10 A m linearly decreasing voltage setting Meter: Digital display (volts/amps) <b>A C – Output Voltage:</b> 0 to 24 V AC or above, continuously adjustable; <b>Current:</b> 0 to 6: Digital display (volts/amps); <b>Power Source:</b> AC 115/230 VAC, 50/60 Hz, <b>Power Use:</b> 320 OR above. <b>UK / USA / JAPAN / EU</b>	7
16.	<b>AC Power meter (bench type) Specifications:</b> Power Meter is equipped with a 16-bit CPU microprocessor Multifunction of full-digitized measurement, calibration and output. Accurately measure the distortion signal of waveform. Except for its essential measurement on AC voltage, AC current, AC power, Power factor, and Frequency, the power meter also provides additional features ratio setting, display value holding, the value of maximum and minimum Holding, range selecting, auto-ranging etc. <b>UK / USA / JAPAN / EU</b>	5
17.	<b>DC Power Supply</b>	7





COM3LAB: Master Unit	1		
Set of Safety Cables (2mm, 16 Qty., 6 x 30cm & 10 x 15cm)	1		
DVD: COM3LAB Software	1		
<b>Additionally recommended:</b>			
COM3LAB Course: Protoboard II	1		
COM3LAB: Protoboard II Accessories	1		
COM3LAB: Suitcase	1		
<b>COM3LAB Multimedia: Electrical Components</b>			
COM3LAB Course: Electronic Components I	1		
COM3LAB Course: Electronic Components II	1		
COM3LAB: Master Unit	1		
Set of Safety Cables (2mm, 16 Qty., 6 x 30cm & 10 x 15cm)	1		
DVD: COM3LAB Software	1		
<b>Additionally recommended:</b>			
COM3LAB Course: Protoboard II	1		
COM3LAB: Protoboard II Accessories	1		
COM3LAB: Suitcase	1		
<b>COM3LAB Multimedia: Digital Technology</b>			
COM3LAB Course: Digital Technology I	1		
COM3LAB Course: Digital Technology II	1		
COM3LAB: Master Unit	1		
Set of Safety Cables (2mm, 16 Qty., 6 x 30cm & 10 x 15cm)	2		
DVD: COM3LAB Software	1		
<b>Additionally recommended:</b>			
COM3LAB: Suitcase	1		
<b>COM3LAB Multimedia: Three-Phase Technology</b>			
COM3LAB Course: Three-Phase Technology	1		
COM3LAB: Master Unit	1		
Set of Safety Cables (2mm, 16 Qty., 6 x 30cm & 10 x 15cm)	1		



	Carefully selected 50 types or above electric & electronics practice themes. <b>UK / USA / JAPAN / EU</b>	
24.	<b>Optoelectronic training system</b> <b>Specifications:</b> Wide range optoelectronic component like photodiode, phototransistor. Photovoltaic cell (solar cell), infrared, ultraviolet, thermal imagine etc. <b>UK / USA / JAPAN / EU</b>	4
<b>Biomedical Workshop</b>		
25.	<b>Teaching Ultrasound and Grey Scale / Color Doppler with all Phantoms simulator cum analyzer</b> <b>UK / USA / JAPAN / EU</b>	1
26.	<b>Ventilator Tester Kit with Different Simulation of Pathologies with Cpap and Bipap</b> <b>UK / USA / JAPAN / EU</b>	1

27	<p><b>Incubator - Radiant Warmer Analyzer</b>  Incubator/Radiant Warmer Analyzer simplifies testing and verifying the performance of baby incubators, transport incubators, and radiant warmers.</p> <ul style="list-style-type: none"> <li>• Airflow</li> <li>• Sound</li> <li>• Humidity</li> <li>• Air and surface temperature in 6 independent points</li> <li>• Optional skin temperature testing</li> </ul> <p><b>Power</b></p> <p><b>Power Adapter – Universal voltage</b>                      Input: 100 V to 240 V with adaptors 50 Hz/60 Hz  Output: 15V dc, 1.3 A maximum</p> <p><b>Rechargeable lithium-ion battery, internal</b>                      7.4 V, 7800 mAh, 58 Wh  24 hour battery life with 30 second sample rate</p> <p><b>Measurements and tests specifications</b></p> <p><b>Air conduction peripheral temperature sensors for incubator (T1-T5)</b>                      5 sensors  Range: 0 °C to 50 °C  Accuracy: ±0.05 °C  Display resolution: 0.01 °C</p> <p><b>Air convection temperature sensors for radiant warmers, sensors in pucks (black discs)</b>                      5 pucks  Range: 0 °C to 50 °C  Accuracy: ±0.2 °C  Display resolution: 0.01 °C</p> <p><b>Relative humidity</b>                      Range: 0 % to 100 %, Accuracy: ±3 % RH (0 % to 100 %, non-condensing)  Display Resolution: 0.1% RH</p> <p><b>Airflow</b>                      C, 50 % RH°Range: 0.2 m/sec to 2.0 m/sec at 35  Accuracy: ±0.1 m/sec  Display Resolution: 0.01 m/sec</p> <p><b>Sound Pressure</b>                      30 dB(A) to 100 dB(A)  Accuracy: ±5 dB(A)  Display resolution: 0.1 dB(A)  IEC-61672-1 Class 2 from 31.5Hz to 8kHz</p> <p><b>Surface temperature</b>                      Range: 5 °C to 60 °C  Accuracy: ±0.5 °C  Display Resolution: 0.05 °C</p> <p><b>Skin temperature probe with reference thermometer</b>                      Range: 0 °C to 50 °C  Accuracy: ±0.05 °C  Display Resolution: 0.01 °C</p> <p><b>UK / USA / JAPAN / EU</b></p>	1
28.	<p><b>ProSim 8 Vital Signs Patient Simulator</b>  The ProSim 8 tests ECG (including fetal ECG/IUP and arrhythmias), respiration, temperature, IBP/cardiac catheterization, cardiac output, NIBP and SpO2 . Wireless PC communication, customized presets, auto-sequences, barcode scanning, onboard memory, direct data capture, printing functions and single-step adjustability maximizes testing productivity; a customized carry case doubles as a mobile work station</p> <p><b>Specifications:</b></p> <p><b>Temperature:</b>  <b>Operating:</b>10 °C to 40 °C (50 °F to 104 °F)  <b>Storage:</b> -20 °C to +60 °C (- 4 °F to 140 °F)  <b>Humidity:</b> 10 % to 90 % non-condensing</p> <p><b>Parameter Specifications:</b></p>	1

**Non-Invasive Blood Pressure****Pressure Units** mmHg or kPa**Manometer (Pressure Meter)**  
**Range** 10 mmHg to 400 mmHg  
**Resolution** 0.1 mmHg  
**Accuracy** ± (0.5 % reading + 0.5 mmHg)**Pressure Source**  
**Target pressure range** 20 mmHg to 400 mmHg  
**Resolution** 1 mmHg**NIBP Simulations**  
**Pulse** 2 mmHg max into 500 ml NIBP system  
**Volume of air moved** 1.25 ml max  
Adult: 60/30 (40), 80/50 (60); 100/65 (77); 120/80 (93); 150/100 (117); and 200/150 (167) and 255/195 (215)  
**Simulations (systolic/diastolic [MAP])**  
Neonatal: 35/15 (22); 60/30 (40); 80/50 (60); 100/65 (77); 120/80 (93) and 150/100  
Pressure variability: systolic and diastolic pressures are variable by 1 mmHg  
Within ± 2 mmHg (at maximal pulse size independent of device under test)  
**Repeatability**  
Maximum rate at 1 ml: 240 BPM achievable with pulses up to 1 ml  
Maximum rate at 1.25 ml: 180 BPM  
**Synchronization: normal Sinus heart rates: 30 BPM to 240 BPM****Synchronization: Arrhythmias** Premature atrial contraction (PAC), premature ventricular contraction (PVC), atrial fibrillation, and missed beat**Leak Test**  
**Target pressure** 20 to 400 mmHg  
**Elapse time** 0:30 to 5:00 minutes: seconds in 30 second steps  
**Leakage rate** 0 mmHg/minute to 200 mmHg/minute**Pressure Relief Test Range** 100 to 400 mmHg**Temperature****Temperature** 30 °C to 42.0 °C in 0.5 °C steps**Accuracy** ± 0.4 °C**Compatibility** Yellow Springs, Inc. (YSI) Series 400 and 700**Output** Circular DIN 4-Pin**Invasive Blood Pressure****Channels** 2, each independently settable with identical parameters and are individually electrically isolated from all other signals**Input/Output Impedance** 300 Ω - or ± 10 %

<b>Exciter Input Range</b>	2 to 16 V peak	
<b>Exciter-Input Frequency Range</b>	DC to 5000 Hz	
<b>Transducer Sensitivity</b>	5 (default) or 40 $\mu\text{V}/\text{V}/\text{mmHg}$	
<b>Pressure Accuracy</b>	$\pm$ (1 % of setting + 1 mmHg) accuracy guaranteed for dc excitation only	
<b>Static Pressure</b>	- 10 to + 300 mmHg in 1 mmHg steps	
<b>Pressure Units</b>	mmHg or Kpa	
<b>Dynamic Waveforms</b>	Types (default pressures)	Arterial (120/80) Radial artery (120/80) Left ventricle (120/00) Right ventricle (25/00) Pulmonary artery (25/10) Pulmonary-artery wedge (10/2) Right atrium (central venous or CVP) (15/10)
	Pressure variability	Systolic and diastolic pressures are independently variable in 1 mmHg steps
<b>Swan-Ganz Sequence</b>	<b>Right atrium, right ventricular (RV), pulmonary artery (PA), pulmonary artery wedge (PAW)</b>	
<b>Cardiac Catheterization</b>	Chambers	Aortic, pulmonary valve, and mitral valve
<b>Respiration Artifact</b>	Arterial, radial artery, and left ventricle	5 % to 10 % multiplication
	Other	5 mmHg or 10 mmHg
<b>BP Output</b>	<b>Circular DIN 5-Pin</b>	
<b>Power-On Default</b>	<b>0 mmHg</b>	
<b>SpO<sub>2</sub> Test (Optional)</b>		
<b>% O<sub>2</sub></b>	Range	30 % to 100 %
	Resolution	1 %
<b>% O<sub>2</sub> Accuracy</b>	<b>With oximeter manufacturer's R-curve</b>	Saturation within UUT specific range: $\pm$ (1 count + specified accuracy of the UUT) Saturation outside UUT specific range: monotonic with unspecified accuracy
	<b>With Fluke Biomedical R-curves</b>	91 % to 100 % $\pm$ (3 counts + specified accuracy of the UUT) 81 % to 90 % $\pm$ (5 counts + specified accuracy of the UUT) 71 % to 80 % $\pm$ (7 counts + specified accuracy of the UUT) Below 7 % monotonic with unspecified accuracy
<b>Respirations</b>		
<b>Rate</b>	0 (OFF), 10 BrPM to 150 BrPM in 1 BrPM steps	

	<table> <tr> <td><b>Waves</b></td> <td>Normal or ventilated</td> </tr> <tr> <td><b>Ratio (inspiration:expiration)</b></td> <td><b>Normal</b> 1:1, 1:2, 1:3, 1:4, 1:5 <b>Ventilated</b> 1:1</td> </tr> <tr> <td><b>Impedance Variations (? Ω)</b></td> <td>0.00 Ω to 1.00 Ω in 0.05 Ω steps and 1 Ω to 5 Ω in 0.25 Ω steps</td> </tr> <tr> <td><b>Accuracy Delta</b></td> <td>± (3 % of setting + 0.05 Ω)</td> </tr> <tr> <td><b>Baseline</b></td> <td>500 Ω, 1000 Ω (default), 1500 Ω, 2000 Ω, Leads I, II, III</td> </tr> <tr> <td><b>Accuracy Baseline</b></td> <td>±5 %</td> </tr> <tr> <td><b>Respiration Lead</b></td> <td>LA or LL (default)</td> </tr> <tr> <td><b>Apnea Selection</b></td> <td>12 sec, 22 sec, or 32 seconds (one-time events), or continuous (Apnea ON = respiration OFF)</td> </tr> <tr> <td><b>Power-On Default</b></td> <td>20 BrPM, delta 1.0 Ω <b>UK / USA / JAPAN / EU</b></td> </tr> </table>	<b>Waves</b>	Normal or ventilated	<b>Ratio (inspiration:expiration)</b>	<b>Normal</b> 1:1, 1:2, 1:3, 1:4, 1:5 <b>Ventilated</b> 1:1	<b>Impedance Variations (? Ω)</b>	0.00 Ω to 1.00 Ω in 0.05 Ω steps and 1 Ω to 5 Ω in 0.25 Ω steps	<b>Accuracy Delta</b>	± (3 % of setting + 0.05 Ω)	<b>Baseline</b>	500 Ω, 1000 Ω (default), 1500 Ω, 2000 Ω, Leads I, II, III	<b>Accuracy Baseline</b>	±5 %	<b>Respiration Lead</b>	LA or LL (default)	<b>Apnea Selection</b>	12 sec, 22 sec, or 32 seconds (one-time events), or continuous (Apnea ON = respiration OFF)	<b>Power-On Default</b>	20 BrPM, delta 1.0 Ω <b>UK / USA / JAPAN / EU</b>	
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29.	<p><b>Rigid &amp; Flexible Endoscope Tester</b> A simple-to-use, quick check for rigid endoscopes.</p> <p>Finally, there is a simple tool for technical and non-technical personnel to perform a quick evaluation of most rigid endoscopes., your staff diagnoses problems during incoming inspections, after complaints, pre- and post-service, and as a routine preventive-maintenance inspection.</p> <p><b>Specifications</b></p> <table> <tr> <td><b>Outer Diameter of Eyepiece</b></td> <td>31.75 mm +0 -0.1 per DIN 58105</td> </tr> <tr> <td><b>End-Cap Inner Diameter</b></td> <td>No less than 120 mm</td> </tr> <tr> <td><b>Optical Design</b></td> <td><b>Focal length:</b> 40 mm ± 3% <b>Refraction:</b> 25 dpt <b>Material:</b> PMMA (Plexiglass) <b>Diameter:</b> 19 mm</td> </tr> <tr> <td><b>Focal Point Adjustment Scale</b></td> <td>16 cm</td> </tr> <tr> <td><b>Maximum Diameter of Rigid Endoscope</b></td> <td>&lt;10 mm</td> </tr> <tr> <td><b>Environmental</b></td> <td><b>Operating Temperature:</b> 15 to 40 °C <b>Storage Temperature:</b> -10 to +65 °C <b>Relative Humidity:</b> 95% max</td> </tr> </table> <p><b>UK / USA / JAPAN / EU</b></p>	<b>Outer Diameter of Eyepiece</b>	31.75 mm +0 -0.1 per DIN 58105	<b>End-Cap Inner Diameter</b>	No less than 120 mm	<b>Optical Design</b>	<b>Focal length:</b> 40 mm ± 3% <b>Refraction:</b> 25 dpt <b>Material:</b> PMMA (Plexiglass) <b>Diameter:</b> 19 mm	<b>Focal Point Adjustment Scale</b>	16 cm	<b>Maximum Diameter of Rigid Endoscope</b>	<10 mm	<b>Environmental</b>	<b>Operating Temperature:</b> 15 to 40 °C <b>Storage Temperature:</b> -10 to +65 °C <b>Relative Humidity:</b> 95% max	1						
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30.	<p><b>Infusion Device Analyzer</b></p> <p><b>Flow rate Measurement</b> <b>Technique:</b> Flow is calculated by measuring volume over time <b>Range:</b> 0.5 ml/h to 1000 ml/h <b>Accuracy:</b> 1 % of reading ±1 LSD for flows of 16 ml/h to 200 ml/h for volumes over 20 ml, otherwise 2 % of reading ±1 LSD for volumes over 10 ml under laboratory conditions <b>Max Test Duration:</b> 10 hours battery</p> <p><b>Volume measurement:</b> <b>Technique:</b> Volume measured directly by the measuring module in minimum sample sizes of 60 microliters <b>Range:</b> 0.06 ml to 999 ml</p>	1																		



	<p><b>Accuracy:</b> 1 % of reading <math>\pm 1</math> LSD for flow rates of 16 ml/h to 200 ml/h for volumes over 20 ml. Otherwise 2 % of reading <math>\pm 1</math> LSD for volumes over 10 ml under laboratory conditions.</p> <p><b>Max Test Duration: 10 hours battery</b></p> <p><b>Pressure Measurement:</b></p> <p><b>Technique:</b> Direct measurement of pressure at the inlet port</p> <p><b>Range:</b> 0 psi to 45 psi or equivalent in mmHg and kPa</p> <p><b>Accuracy:</b> 1 % of full scale <math>\pm 1</math> LSD under laboratory conditions</p> <p><b>Max Test Duration: 30 Minutes</b></p> <p><b>UK / USA / JAPAN / EU</b></p>													
31	<p><b>Phototherapy Radiometer</b></p> <p>The Phototherapy Radiometer is designed for the accurate measurement of light radiation in the blue part of the spectrum from 400-480 nanometers.</p> <p><b>Features include:</b></p> <ul style="list-style-type: none"> <li>• Large LCD</li> <li>• Accurate to <math>\pm 5</math> % of full scale</li> <li>• Spectral range of 429 nm to 473 nm</li> </ul> <p><b>Specifications</b></p> <table border="1"> <tr> <td><b>Spectral range</b></td> <td>429 - 473 nm (max. 97% response at 453 nm)</td> </tr> <tr> <td><b>Measurement range</b></td> <td>0-1999 <math>\mu\text{W}/\text{cm}^2</math></td> </tr> <tr> <td><b>Resolution</b></td> <td>1 <math>\mu\text{W}/\text{cm}^2</math></td> </tr> <tr> <td><b>Probe</b></td> <td>Lens matches the cosine receiving function of human skin</td> </tr> <tr> <td><b>Power</b></td> <td>9 V battery; an arrow appears on display for battery replacement; 150 continuous hours operation</td> </tr> </table> <p><b>UK / USA / JAPAN / EU</b></p>	<b>Spectral range</b>	429 - 473 nm (max. 97% response at 453 nm)	<b>Measurement range</b>	0-1999 $\mu\text{W}/\text{cm}^2$	<b>Resolution</b>	1 $\mu\text{W}/\text{cm}^2$	<b>Probe</b>	Lens matches the cosine receiving function of human skin	<b>Power</b>	9 V battery; an arrow appears on display for battery replacement; 150 continuous hours operation	1		
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<b>Power</b>	9 V battery; an arrow appears on display for battery replacement; 150 continuous hours operation													
32	<p><b>Fetal Simulator</b></p> <p>Fetal Simulator simulates fetal and maternal ECG as well as uterine activity to test and troubleshoot fetal electronic monitors and to train clinical staff.</p> <p><b>Features include:</b></p> <ul style="list-style-type: none"> <li>• Mechanical heart for ultrasound simulation</li> <li>• TOCO simulation (external or IUP)</li> <li>• Ultrasound simulation (including twins)</li> <li>• Maternal ECG simulation</li> </ul> <table border="1"> <tr> <td colspan="2"><b>Fetal ECG</b></td> </tr> <tr> <td><b>Static Rates:</b></td> <td>30, 60, 90, 120, 150, 180, 210, and 240 BPM</td> </tr> <tr> <td><b>ECG Sensitivity:</b></td> <td>50 <math>\mu\text{V}</math>, 100 <math>\mu\text{V}</math>, 200 <math>\mu\text{V}</math>, 0.5 mV, 1 mV, and 2 mV US-1 tracks primary fetal ECG rates. US-2 tracks secondary fetal activity for either independent "normal" or "twins simulation, US-2 rate fixed at 140 BPM</td> </tr> <tr> <td><b>Fetal Patterns:</b></td> <td>Note: US-1 fetal ECG track these selections. US-2 is in normal pattern, except during TREND #1 selection.</td> </tr> <tr> <td><b>Variability selections (added to fetal ECG)</b></td> <td>Absent variability, low variability, mild variability, high variability, severe variability, and long-term variability</td> </tr> <tr> <td><b>Note:</b></td> <td>These patterns repeat and toco channel will perform toco wave selected</td> </tr> </table>	<b>Fetal ECG</b>		<b>Static Rates:</b>	30, 60, 90, 120, 150, 180, 210, and 240 BPM	<b>ECG Sensitivity:</b>	50 $\mu\text{V}$ , 100 $\mu\text{V}$ , 200 $\mu\text{V}$ , 0.5 mV, 1 mV, and 2 mV US-1 tracks primary fetal ECG rates. US-2 tracks secondary fetal activity for either independent "normal" or "twins simulation, US-2 rate fixed at 140 BPM	<b>Fetal Patterns:</b>	Note: US-1 fetal ECG track these selections. US-2 is in normal pattern, except during TREND #1 selection.	<b>Variability selections (added to fetal ECG)</b>	Absent variability, low variability, mild variability, high variability, severe variability, and long-term variability	<b>Note:</b>	These patterns repeat and toco channel will perform toco wave selected	1
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<b>Note:</b>	These patterns repeat and toco channel will perform toco wave selected													

	<p><b>Optional mechanical fetal heart</b> Provides a mechanical interface to the ultrasound transducer; can be connected to either ultrasound channels. This option, due to its power consumption, requires an ac power adapter to be connected.</p> <p><b>UK / USA / JAPAN / EU</b></p>	
33	<p><b>Medical ScopeMeter® Portable Oscilloscope</b> Taking the guesswork out of medical imaging testing and troubleshooting, the Medical ScopeMeter® Portable Oscilloscope,</p> <ul style="list-style-type: none"> <li>• Connect-and-view automated capture of complex waveforms: simplified connect-and-go for longer time-based measurements</li> <li>• Memory save and recall set-up</li> <li>• Waveform compare for quick and easy pass/fail</li> <li>• Single-button user interface very intuitive and easy to navigate</li> <li>• 3-in-1 multimeter, portable oscilloscope and paperless recorder saves you time and tools</li> </ul> <p><b>Specifications</b></p> <ul style="list-style-type: none"> <li>• 2 Channel</li> <li>• Voltage probe set, 10:1, 300 MHz, one set red</li> <li>• Voltage probe set, 10:1, 300 MHz, one set blue</li> <li>• TL175 TwistGuard™ safety-designed test leads set (1 red, 1 black)</li> <li>• External battery charger for BP290 and BP291</li> <li>• FlukeView Software for Windows</li> <li>• Hard shell protective carrying case</li> <li>• Li-Ion battery pack, 2400 mAh</li> <li>• Medical Accessory Kit</li> </ul> <p><b>UK / USA / JAPAN / EU</b></p>	2

34	<p><b>MaxO2 PLUS AE Oxygen Analyzer</b>  The MaxO2 PLUS AE is an oxygen tester analyzer that measures the oxygen concentration in a flow of gas from a medical gas source or through a medical gas-flow device such as a ventilator or anesthesia system, or within an infant incubator. It is handheld and rugged to suit the needs of portable use. The MaxO2 PLUS AE comes equipped with a two-year warranty on both analyzer and sensor.</p> <p><b>Features include:</b></p> <ul style="list-style-type: none"> <li>• One-touch calibration, with reminder</li> <li>• Long battery life (approx. 5,000 hrs)</li> <li>• Impact resistant and drip proof</li> <li>• External MAX-250E Oxygen Sensor</li> </ul> <p><b>Specifications</b></p> <table border="1"> <tr> <td><b>Measurement Range:</b></td> <td>0 % to 100 %</td> </tr> <tr> <td><b>Resolution:</b></td> <td>0.1 %</td> </tr> <tr> <td><b>Accuracy and Linearity:</b></td> <td>1 % of full scale at constant temperature and pressure when calibrated at full range</td> </tr> <tr> <td><b>Total Accuracy:</b></td> <td>± 3 % actual oxygen level overfull scale range</td> </tr> <tr> <td><b>Response Time:</b></td> <td>90 % of final value in approx. 15 seconds</td> </tr> <tr> <td><b>Warm-up Time:</b></td> <td>None required</td> </tr> <tr> <td><b>Power Supply</b></td> <td> <b>Battery Life:</b> Approx. 5000 hrs with continuous use  <b>Low Battery Indication:</b> "BAT" icon displayed on LCD  <b>Sensor Type:</b> Maxtec® MAX-250E for AE model  <b>Expected Sensor Life:</b> &gt; 900,000 O2 % hours minimum, 2 years in typical medical applications  <b>Power Requirements:</b> 2, AA alkaline batteries </td> </tr> </table> <p><b>UK / USA / JAPAN / EU</b></p>	<b>Measurement Range:</b>	0 % to 100 %	<b>Resolution:</b>	0.1 %	<b>Accuracy and Linearity:</b>	1 % of full scale at constant temperature and pressure when calibrated at full range	<b>Total Accuracy:</b>	± 3 % actual oxygen level overfull scale range	<b>Response Time:</b>	90 % of final value in approx. 15 seconds	<b>Warm-up Time:</b>	None required	<b>Power Supply</b>	<b>Battery Life:</b> Approx. 5000 hrs with continuous use <b>Low Battery Indication:</b> "BAT" icon displayed on LCD <b>Sensor Type:</b> Maxtec® MAX-250E for AE model <b>Expected Sensor Life:</b> > 900,000 O2 % hours minimum, 2 years in typical medical applications <b>Power Requirements:</b> 2, AA alkaline batteries	1
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35	<p><b>Comprehensive tool kit with Weatherproof Toolbox</b>  <b>UK / USA / JAPAN / EU</b></p>	6														
36.	<p><b>Ultraviolet A,B,C Tester</b>  <b>UK / USA / JAPAN / EU</b></p>	1														
37.	<p><b>IR A,B,C Tester</b>  <b>UK / USA / JAPAN / EU</b></p>	1														
38.	<p><b>Gas Flow Analyzer</b>  Accurately and reliably conduct in-depth testing of gas flow medical equipment, especially devices requiring ultra-low flow and ultra-low pressure measurements with Gas Flow Analyzer.</p> <ul style="list-style-type: none"> <li>• Designed to world renowned Molbloc-L calibration specifications ensuring traceability to global regulatory standards</li> <li>• Conduct anesthesia and flow meter tests that rely on high accuracy</li> <li>• Built-in line sensors automatically test humidity, temperature and oxygen while compensating for atmospheric pressure and environmental conditions</li> <li>• Perfect for OEMs, clinical benchtop testing, government and field service use</li> </ul> <table border="1"> <tr> <th colspan="2">Features</th> </tr> <tr> <td>Battery life hours</td> <td>8 hrs</td> </tr> <tr> <td>Charge time in hours</td> <td>5 hrs, typical</td> </tr> </table>	Features		Battery life hours	8 hrs	Charge time in hours	5 hrs, typical	1								
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Battery life hours	8 hrs															
Charge time in hours	5 hrs, typical															

Memory	internal memory
Ultra-low flow ports	±750 ml/min
Ultra-low pressure port	0 to 10 mbar
<b>Flow</b>	
<b>Full range flow channel (includes both low and high flow)</b>	
Range	±300 slpm
Accuracy (air)	1.7 % or 0.04 slpm
<b>Ultra-low flow channel</b>	
Range	±750 ml/min
Accuracy (air)	±1.7 % or 0.01 slpm
<b>Volume</b>	
Range	±100 l
Accuracy	±1.75 % or 0.02 l
<b>Pressure</b>	
<b>High pressure</b>	
Range	-0.8 to 10 bar
Accuracy	±1 % or ±0.007 bar
<b>Differential low pressure</b>	
Range	±160 mbar
Accuracy	±0.5 % or ±0.1 mbar
<b>Ultra-low pressure</b>	
Range	0 to 10 mbar
Accuracy	±1 % or ±0.01 mbar
<b>Airway pressure</b>	
Range	±160 mbar
Accuracy	±0.5 % or ±0.1 mbar
<b>Barometric pressure</b>	
Range	550 to 1240 mbar
Accuracy	±1 % or ±5 mbar
<b>Breath parameters</b>	
Inspiratory tidal volume range	0 to 60 l
Inspiratory tidal volume accuracy	±1.75 % or 0.02 l
Expiratory tidal volume range	0 to 60 l
Expiratory tidal volume accuracy	±1.75 % or 0.02 l
Minute volume range	0 to 100 l
Minute volume accuracy	±1.75 % or 0.02 l
Breath rate range	1 to 1500 bpm
Breath rate accuracy	±1 %
Inspiratory to expiratory time ratio (I:E) range	1:300 to 300:1
Inspiratory to expiratory time ratio (I:E) accuracy	±2 % or 0.1
Peak inspiratory pressure (PIP) range	±160 mbar
Peak inspiratory pressure (PIP) accuracy	±0.75 % or 0.1 mbar

Inspiratory pause pressure range	±160 mbar
Inspiratory pause pressure	±0.75 % or 0.1 mbar
Mean airway pressure range	±160 mbar
Mean airway pressure accuracy	±0.75 % or 0.1 mbar
Positive end expiratory pressure (PEEP) range	±160 mbar
Positive end expiratory pressure (PEEP) accuracy	±0.75 % or 0.1 mbar
Lung compliance range	0 to 1000 ml/mbar
Lung compliance accuracy	±3 % or 0.1 ml/mbar
Inspiratory time range	0 to 60 s
Inspiratory time accuracy	0.02 s
Inspiratory hold time range	0 to 60 s
Inspiratory hold time accuracy	1 % or 0.1 s
Expiratory time range	0 to 90 s
Expiratory time accuracy	0.5 % or 0.01 s
Expiratory hold time range	0 to 90 s
Expiratory hold time accuracy	0.02 s
Peak expiratory flow range	±300 lpm
Peak expiratory flow accuracy	±1.7 % or 0.04 lpm
Peak inspiratory flow range	±300 lpm
<b>UK / USA / JAPAN / EU</b>	

### Gait Analysis Lab

39.	<p style="text-align: center;"><b><u>"GAIT ANALYSIS LABORATORY"</u></b></p> <p><b><u>ITEM # 39</u></b></p> <p><b><u>3D Printer with different materials</u></b></p> <p>UP 3D Printing Software with STL import &amp; Automatic Support Generation</p> <p>1 x 500g Spool of White ABS Material  2 x UP Flex Boards  2 x UP Perf Boards  Tool Kit &amp; Manual</p> <p><b><u>CONSUMABLES</u></b></p> <p><b><u>ABS</u></b></p> <p>White ABS Material, 500g (2 x Spools)  Blue ABS Material, 500g (2 x Spools)  Green ABS Material, 500g (2 x Spools)  Black ABS Material, 500g (2 x Spools)  Red ABS Material, 500g (2 x Spools)  Yellow ABS Material, 500g (2 x Spools)  ABS Rainbow Pack, 500g (6 x Spools)</p>	1
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		<p>(1 of each colour: white, blue, green, black, red &amp; yellow)</p> <p><b>PLA</b>  Hawaii Blue PLA Material, 500g (2 x Spools)  Pompeii Grey PLA Material, 500g (2 x Spools)  Rio Green PLA Material, 500g (2 x Spools)</p> <p>Natural White PLA Material, 500g (2 x Spools)</p> <p><b>Perf Boards</b>  Perf Board for UP mini 2  Perf Board for UP Plus 2  Perf Board for UP BOX+</p> <p><b>UK/USA/JAPAN</b></p>	
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### Biomaterial Lab

40	<p><b>Orthopedic Implants Starter Kit</b></p> <ul style="list-style-type: none"> <li>• Austin-Moore prosthesis : for fracture of the neck of femur</li> <li>• Baksi's prosthesis: for elbow replacement</li> <li>• Charnley prosthesis: for total hip replacement</li> <li>• Condylar blade plate: for condylar fractures of femur</li> <li>• Ender's nail : for fixing inter-trochanteric fracture</li> <li>• Grosse-Kempf (GK) nail : for tibial or femoral shaft fracture</li> <li>• Harrington rod: for fixation of the spine</li> <li>• Hartshill rectangle: for fixation of the spine</li> <li>• Insall Burstein prosthesis: for total knee replacement</li> <li>• Richard N.W. Wohnsinterspinous implant and implantation instrument: intended to be implanted between two adjacent dorsal</li> <li>• Kirschner wire : for fixation of small bones</li> <li>• Kuntscher nail : for fracture of the shaft of femur</li> <li>• Luque rod : for fixation of the spine</li> <li>• Moore's pin : for fracture of the neck of femur</li> <li>• Neer's prosthesis : for shoulder replacement</li> <li>• Rush nail : for diaphyseal fractures of long bone</li> <li>• Smith Peterson (SP) nail : for fracture of the neck of femur</li> </ul> <p>Smith Peterson nail with McLaughlin's plate: for inter-trochanteric fracture</p> <ul style="list-style-type: none"> <li>• Seidel nail: for fracture of the shaft of humerus</li> <li>• Souter's prosthesis : for elbow replacement</li> <li>• Steffee plate : for fixation of the spine</li> <li>• Steinmann pin : for skeletal traction[24]</li> <li>• Swanson prosthesis : for the replacement of joints of the fingers</li> <li>• Talwalkar nail : for fracture of radius and ulna</li> <li>• Thompson prosthesis : for fracture of the neck of femur</li> <li>• Dynamic Hip Screw and Dynamic Condylar Screw</li> <li>• Set of screws, wires, nails and locking.</li> </ul> <p><b>UK / USA / JAPAN / EU</b></p>	1 set
41.	<p><b>Ortho Bones (Implant Technology) and Realistic Features</b>  <b>UK / USA / JAPAN / EU</b></p>	4
42.	<p><b>Complete Transducers Kit</b></p>	01

## Specification

### Instrumentation Module

Wheatstone Bridge with reference potentiometer and selectable value ratio arms.

Operational Amplifier with selectable gain and differential input

**Oscillator** Centre frequency 465 kHz.

**Frequency Discriminator** FM operation and on-board phase sensitive rectifier

**Power Amplifier** Unity voltage gain. Maximum output 4 W.

**Test Rig** Slide scale micrometer control with 25 mm range, 0.5 mm/full rotation micrometer. Sub-unit lock for Electro-mechanical Transducers and Optical Detector Assembly.

### Electro-mechanical Transducers

Variable Resistor 10 k $\Omega$ , 0.5 W linear.

Variable Capacitor (Area) 2.5 – 20 pF.

Variable Capacitor (Distance) 15 – 40 pF.

Variable Inductor 9  $\Omega$ , 23 – 81  $\mu$ H.

Variable Differential Transformer *Primary resistance*: 6.3  $\Omega$ , 140 turns.

*Secondary resistance*: 2.5  $\Omega$ , 140 turns.

Strain Gauge 2 off, 120  $\Omega$  resistance

**Conductance Probe** Two parallel, conductive, supported rods with flying leads.

### Heat Transducers

Bi-metallic switch Operating temp. 45  $^{\circ}$ C. Differential 5  $^{\circ}$ C.

Thermocouple Copper constantan junction approx. 50  $\mu$ V/ $^{\circ}$ C.

Thermistor Resistance at 20  $^{\circ}$ C = 2 k $\Omega$ .

Platinum resistance Resistance at 20  $^{\circ}$ C = 100  $\Omega$ .

**Heat Bar** 100/240 V, 50/60 Hz operation.

Main heater 50 W.

Auxiliary heater resistance, 30 W (cold).

### Light Transducers

Photo-transistor BP X25.

Photo-diode RS components.

Photo-resistor RPY33.

Lamp holder MBC. 14.4 V, 0.1 A.

Optical Filters 9 slide-mounted. 440, 470, 490, 520, 550, 580, 600, 690, 700 nm. 1 infra-red.

**Manual supplied** Transducers Kit TK2942-1, Books 1, 2 & 3 covering all three kits. The

manuals contain 28 assignments, each having a practical section and an applications section giving industrial examples of the use of the transducer principle under discussion.

**Power Supply** External  $\pm 15\text{ V @ }1.5\text{ A}$ . The Feedback d.c. Power Supply 01-100 is recommended.

Function Generator Timer Counter, Oscilloscope, Capacitance and Resistance Boxes and a Multimeter)

**Complete with :-**

**Operational Amplifier Tutor**

Operational Amplifier Tutor  
Power Supply  $+5\text{ V}$ ,  $\pm 15\text{ V}$

An open-board operational amplifier tutor providing three IC Op Amps, one discrete amplifier,  $\pm 10\text{ V}$  switchable supply, scaling potentiometers and all connecting leads. Front panel mimic diagram showing elements and circuitry. Complete with student assignment manual containing at least 13 assignments

**Specification**

**Operational Amplifiers** 3 Type 741 general purpose, with inverting and non-inverting inputs.

1 Discrete component amplifier with differential input, balance control, constant current source and output amplifier.

**Scaling** 3 Single gang  $10\text{ k}\Omega$  potentiometers. 1 Dual gang  $100\text{ k}\Omega$  potentiometer.

**Connections** All on-board circuit connections by 2 mm sockets and stackable leads.

Amplifier outputs and power supply connections by 4 mm sockets. 4 sets of 4 mm - 2 mm transfer sockets.

**Switches** 2 three-position switches, one dedicated to the supply of  $\pm 10\text{ V}$ .

**Power Outputs** 4 sets of  $0\text{ V}$ ,  $\pm 10\text{ V}$  sockets.

**Power requirements**  $0\text{ V}$ ,  $\pm 15\text{ V}$  d.c. regulated at  $200\text{ mA}$   
**UK / USA / JAPAN / EU**



	<p><b>Material Testing Machine Attachments:</b></p> <ul style="list-style-type: none"> <li>• Bending Accessories</li> <li>• Four Point bending</li> <li>• Load Anvil</li> <li>• Photo elastic Accessories</li> <li>• Shear Accessories</li> <li>• Compression Accessories</li> <li>• Test Samples ( Flat Coupons (Metals &amp; Plastic), Shear Sample, Photo elastic Beams, Compression samples)</li> <li>• Experiment Manual</li> <li>• With Computer interface</li> <li>• With complete accessories (Clevis Grip , adapters etc.)</li> </ul> <p><b>UK / USA / JAPAN / EU</b></p>	
<b>Biomedical Instrumentation Lab</b>		
44.	<p><b>Human Physiology Teaching Kit</b>  It features one compact form factor integrated with 12 of the most commonly used instruments in the laboratory, including an oscilloscope, digital multimeter, function generator, variable power supply, and Bode analyzer. You can connect the PC to these various measurements through USB plug-and-play capabilities and build circuits on a detachable protoboard</p> <ul style="list-style-type: none"> <li>• ECG, Pulse, Heart sounds, Blood pressure, EMG, EEG, Reflexes Response, Skeletal Muscles, Spirometer</li> </ul> <p><b>UK / USA / JAPAN / EU</b></p>	02
45.	<p><b>Required Add-ons for available unit</b>  - XR 4.0 X-ray Fluorescent Screen (09057-26_) Phywe  - XR 4.0 X-ray Blood Vessel model of contrast fluid (09058-06)  - XRI 4.0 X-ray imaging Set Radio photography set, 09150-88  - XRD 4.0 X-ray dosimetry and radiation damage upgrade set 09170-8</p> <p><b>UK / USA / JAPAN / EU</b></p>	1 each
46.	<p><b>Transducers and Instrumentation Trainer</b>  The Transducers and Instrumentation Trainer shows didactically the function principles of the transducers most used in industry. It is divided into two parts: the lower part, in which all the input and output transducers are found, while in the upper part, the system of signal conditioning and those of instrumentation are found;</p> <p><b>Input Transducers:</b>  Resistance Transducers for applications in angular or linear position:, The Wheatstone Bridge circuit., Temperature sensor IC “Integrated Circuit LM 335”., Photovoltaic Cell. Phototransistor. Photodiode PIN. Photoconductive Cell. Linear Variable Differential Transformer LVDT. Extensiometric Transducer., Airflow Sensor. Air pressure Sensor. Humidity sensor, Slotted optoelectronic Sensor. Opto- reflective Sensor. Inductive sensor, Hall effect Sensor. Permanent D.C. magnet tachogenerator, Dynamical microphone. Ultrasonic receiver.</p> <p><b>Output Transducers:</b>  Electrical Resistance, Incandescent Lamp., Applications for the sound output: Buzzing (Buzzer). , Mobile coil loudspeaker, Ultrasonic transmitter. Applications of linear or angular motion: D.C. Soleinod., D.C. Relay., Solenoid Valve. , Permanent Magnet D.C. Motor.</p> <p><b>Signal Conditioners:</b>  D.C. Amplifiers. A.C. Amplifier. , Power Amplifier. Current Amplifier. , Buffers., Inverting Amplifier. , Differential amplifier. , V/F and F/V Converters. V/I and I/V Converters. , Full Wave Rectifier., Hysteresis</p>	02

	convertible Comparator. , Electronic switch. Oscillator 40 kHz. , Filter 40 kHz. Time-constant convertible Low Pass Filter., Circuit with Mathematical Operation: Adding amplifier.Integrator with different time constants. Differentiator with different time constants. Instrumentation Amplifier. Circuit SAMPLE & HOLD., Amplifiers with gain control and offset. <b>UK / USA / JAPAN / EU</b>	
47.	<b>Educational Ultrasound Apparatus</b> <ul style="list-style-type: none"> <li>• Phantom</li> <li>• Ultrasonic Echoscope</li> <li>• Ultrasonic Probe</li> <li>• Coupling Gel</li> <li>• Ultrasonic Doppler Apparatus</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	03
48.	<b>Educational Doppler Apparatus</b> <ul style="list-style-type: none"> <li>• Phantom</li> <li>• Ultrasonic Probe</li> <li>• Coupling Gel</li> <li>• Ultrasonic Doppler Apparatus</li> <li>• With Computer interface</li> <li>• With complete accessories</li> </ul> <b>UK / USA / JAPAN / EU</b>	04
<b>Telemedicine</b>		
49.	<b>Compact DAQ Module with sensors to acquire real-time physiological data and LabVIEW software</b> <b>Practical to be performed:</b> <ul style="list-style-type: none"> <li>• To acquire physiological data from biomedical sensors into VIs.</li> <li>• To apply advance analysis &amp; measurements on acquired signals.</li> <li>• To communicate with VIs across a network using UDP.</li> <li>• To communicate with VIs across a network using TCP/IP protocol.</li> <li>• To observe live data streaming using network streams.</li> <li>• To share data using wireless communication protocols.</li> <li>• To setup a Tele-Monitoring system.</li> </ul> To design a Biomedical Data Management System using LabVIEW <b>UK / USA / JAPAN / EU</b>	01
<b>Biomedical Control System</b>		
50.	<b>Base Platform WITH</b> <ul style="list-style-type: none"> <li>• DC Motor Control Board</li> <li>• Actuators and Motors Add on Board</li> <li>• Servo Control System with Embedded Controller</li> </ul> <b>UK / USA / JAPAN / EU</b>	03
<b>Neural Network Equipment List</b>		
51.	<b>The Nervous System: Model experimenting illustrating the development of resting potential</b> <ul style="list-style-type: none"> <li>• To analyze Ionic permeability</li> <li>• Demonstrate artificial cell membrane</li> <li>• To work on ion pump</li> <li>• To regulate diffusion potential</li> </ul>	03

	<b>UK / USA / JAPAN / EU</b>		
52.	<b>Neurosimulator: Membrane time constant and low-pass filtering (with cobra 4)</b> <ul style="list-style-type: none"> <li>• Neuro-simulator</li> <li>• Cobra-4 Basic Unit, USB</li> <li>• Neuro-simulator, Power supply 12V/ 2 A</li> <li>• Software Cobra 4 with universal Recoder</li> </ul> <b>UK / USA / JAPAN / EU</b>		03
53.	<b>53 COMPACT 1000 PRO CNC ROUTER</b>  <u><b>Technical Specification :-</b></u> Machine Length (A) 875mm Machine Depth (B) 765mm Machine Height (C) 675mm Length with Optional Base (D) 1678mm Height with Optional Base (E) 1440mm Machine Weight 116kg Machine Weight with Opt. Base 230kg Table Size 400 x 240mm Travel X Axis 400mm Travel Y Axis 240mm Travel Z Axis 110mm Beam Clearance 140mm Max. Spindle Speed 24000rpm Non-Ferrous Metal Cutting Yes Spindle Speed Control Yes Spindle Speed Override Yes Max. Feed Rate 5000mm/min Max. 3D Profiling 4500mm/min Mains Supply Requirements* Single Phase Spindle Motor 1.0kW Axes Motors Stepper Volts 230VAC Amps 8 Amps Hz 50 Hz Electric Connection 13 A Socket <b>UK / USA / JAPAN / EU</b>	<b>1 Set</b>	03
54.	<b>Neurobiology: nerve cell interactions (with cobra 4)</b> <ul style="list-style-type: none"> <li>• Neurobiology Lab, 230 V</li> <li>• Complex Neural Networks</li> <li>• Nerve cell interactions</li> <li>• Additional Nerve Cell</li> </ul> <b>UK / USA / JAPAN / EU</b>		03
	<b>Microprocessor and Microcontroller</b>		
55.	CanaKit Raspberry Pi3 Complete Starter Kit-32 GB Edition <b>UK / USA / JAPAN / EU</b>		7
56.	Arduino Basic Kit <b>UK / USA / JAPAN / EU</b>		7
57.	Inter IoT Developer Kit		07

	<b>UK / USA / JAPAN / EU</b>	
58.	BeagleBoard-X15 ARM Cortex A-15 <b>UK / USA / JAPAN / EU</b>	07
59.	Benchtop combined Router and Lathe — A3RTCmi <sup>2</sup> <b>UK / USA / JAPAN / EU</b>	01

**Terms & Conditions:**

**PRICE** : C&F Karachi by Air & Local

**COUNTRY OF ORIGIN:** USA, UK, Japan , Europe ,Netherlands

**SHIPMENT** : Country of origin & port of shipemnt must be same.

**VALIDITY** : 30 Days

**SHIPMENT** : 3 Months after receipt of confirmed LC

**WARRANTY** : 1 year comprehensive warranty

**INSTALLATION** : Will be provided by factory trained engineer free of cost.

## B. Computers and UPS for Equipments

Computers and ups required for the Equipments with are listed and specifications are given below:

S.No	Specifications	Quantity
1.	Core i5 7500 (7TH GEN.) 8GB RAM -1TB SATA HARD DRIVE - INTEL HD GRAPHICS - DVD RW - KEYBOARD – MOUSE	31
2.	Intel CORE i7 (7th Gen.), 16GB Memory, NVIDIA Ge Force GTX 1070, 256 GB Solid State Drive + 2TB SATA HARD DRIVE - DVDRW - KEYBOARD – MOUSE	02
3.	<b>UPS</b> 1 KVA UK / USA/ JAPAN / EU	33

## C. Fixtures and Furniture's

S.No	Name	Quantity
01.	Office Table 2.5ft to 4ft	06
02.	Medium Back Revolving Chair	06
03.	Almarih for Library	04



**LIAQUAT UNIVERSITY OF MEDICAL & HEALTHS**

**SCIENCES JAMSHORO**

**BIDDING DOCUMENTS**

**FOR**

**Tender for Purchase Supply & Installation of Category A. Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras, at LUMHS Jamshoro. Category B. Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multi Media Projectors, for Institute of Physiotherapy, LUMHS Jamshoro. & Category C. Lab equipment, Computers, UPS, Furniture & Fixture for Institute of Bio Medical Engineering & Technology LUMHS Jamshoro.**

**PART ONE (FIXED)**

- Instructions to Bidders (ITB)
- General Conditions of Contract (GCC)

*Terms and conditions for*

**A) Purchase Supply & Installation of Category A. Walk Through Metal Detector Gate, Hand Held Metal Detector, Biometric Face Finger Print Devices, Closed Circuit Television (CCTV) with cameras, at LUMHS jamshoro.**

**(B) Puchase & Supply of Category B. Office Appliances, Furniture, Lab. Equipment, Computers, Split Air Conditioners, UPS, Photocopier Machines & Multi Media Projectors, for Institute of Physiotherapy, LUMHS Jamshoro.**

**(C) Category C. Lab equipment, Computers, UPS, Furniture & Fixture for Institute of Bio Medical Engineering & Technology LUMHS Jamshoro.**

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**Part One - Section I.**  
**Instructions to Bidders**

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## Instructions to Bidders

### A. Introduction

#### 1. Source of Funds

- 1.1 The Procuring agency has received /applied for loan/grant/federal/provincial/local government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project/schemes specified in the bidding data and it is intended that part of the proceeds of this loan/grant/funds/will be applied to eligible payments under the contract for which these bidding documents are issued.
- 1.2 Payment by the Fund will be made only at the request of the Procuring agency and upon approval by the Government of Sindh and incase of a project will be subject in all respect to the terms and conditions of the agreement. The Project Agreement prohibits a with drawl from the allocated fund account forth purpose of any payment to person so entities, or for any import of goods, if such payment or import, to the knowledge of the Federal Government/ Sindh Government, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Procuring agency shall derive any rights from the Project Agreement or have any claim to the allocated fund proceeds.

## 2. Eligible Bidders

- 2.1 This Invitation for Bids is open to all suppliers from eligible source as defined in the SPP Rules, 2010 and its Bidding Documents except as provided hereinafter.
- 2.2 The bidder must possess valid authorization from foreign principal / manufacturer and in case of manufacture they should have a documentary proof to the effect that they are the original manufacture of the required goods.
- 2.3 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 Procuring agency 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 due under this Invitation for Bids.
- 2.4 Government-owned enterprises in the Province of Sindh 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 Government of Sindh.
- 2.5 Bidders shall 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 of 35 (1) of SPPRA Rules 2010.
- 2.6 Bidder should have minimum ten (10) years experience in supply in Pakistan.
- 2.7 Bidder must have trained person including application to perform including application to perform experiment at sites for minimum five (05) years.
- 2.8 Any offer not received as per terms and conditions of the bidding documents is liable to be ignored. No offer shall be considered if:-
  1. Received from earnest money from any firm.
  2. It is received after the time and date fixed for its receipt.
  3. The tender is unsigned.
  4. the offer is ambiguous
  5. the offer is conditional.
  6. the offer is from a firm blacklisted, suspended or removed from the approved list.
  7. The offer is received by telegram/Fax.
  8. Offer received with shorter validity than required in the tender enquiry.
  9. The offer is for store not conforming to specification indicated in the tender enquiry No counter offer will be accepted.

- 3. Eligible Goods and Services**
- 3.1 All goods and related services to be supplied under the contract shall have their origin in eligible source countries, defined in the SPP Rules, 2010 and its Bidding Documents, and all expenditures made under the contract will be limited to such goods and services.
- 3.2 For the purpose of this clause (a) the term "Good" includes any goods that are the subject of this limitation for bids and (b) the term services includes related services such as transportation insurance, after sale services / spare parts availability etc.
- 3.3 In case of imported good. Manufacturer and product should be ISO Certified.
- 4. Cost of Bidding**
- 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring agency named in the Bid Data Sheet, here in after referred to as "the Procuring agency," will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

**B. The Bidding Documents**

The Bidder must quote all none basis for each package specification.

- 5. Content of Bidding Documents**
- 5.1 The bidding documents include:
- (a) Instructions to Bidders (ITB)
  - (b) Bid Data Sheet
  - (c) General Conditions of Contract (GCC)
  - (d) Special Conditions of Contract (SCC)
  - (e) Schedule of Requirements
  - (f) Technical Specifications
  - (g) Bid Form and Price Schedules
  - (h) Bid Security Form
  - (i) Contract Form
  - (j) Performance Security Form
  - (k) Manufacturer's Authorization Form
  - (l) Detail of Technical Staff.
  - (m) Financial standings/obligation/GST/Income Tax
- 5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the

rejection of its bid.

**6. Clarification of Bidding Documents**

6.1 A Prospective Bidder requiring any clarification of the bidding documents may notify the Procuring agency in writing. The Procuring agency will respond in writing to any request for clarification of the bidding documents which it receives no later than ten (10) working days prior to the dead line for the submission of bids prescribed in the Invitation to Bids. Written copies of the Procuring agency's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all interested bidders that have received the bidding documents.

**7. Amendment of Bidding Documents**

7.1 At any time prior to the dead line for submission of bids, the Procuring agency, for any reason, whether at its own initiative or in response to a clarification requested by a interested Bidder, may modify the bidding documents by amendment.

7.2 All Prospective bidders that have received the bidding documents shall be notified of the amendment in writing, and will be binding on them.

7.3 In order to allow Prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Procuring agency, at its discretion, may extend the deadline for the submission of bids. Amendment notice to that effect shall be communicated in the same manner as the original invitation to bid.

**C. Preparation of Bids**

**8. Language of Bid**

8.1 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 written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in english, in which case, for purposes of interpretation of the Bid, the translation shall govern.

**9. Documents Comprising the Bid**

9.1 The bid prepared by the Bidder shall comprise the following components:

- (a) A Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11, and 12;
- (b) Documentary evidence established in accordance with ITB

Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;

(c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and

(d) bid security furnished in accordance with ITB Clause 15.

#### 10. Bid Form

10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

#### 11. Bid Prices

11.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.

11.2 Form for price schedule is to be filled in very carefully and should be typed. Any alteration / correction must be initiated. Every page is to be signed and stamped at the bottom. Serial number/bid number of the quoted item should be highlighted.

11.3 The bidder should quote the prices of goods according to the technical specification. The specification of goods different from the demand of enquiry, shall straightway be rejected.

11.4 The bidder is required to offer competitive price. All prices must include relevant taxes and duties where applicable. If there is no mention of taxes, the offered / quoted price shall be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the procuring agency.

11.5 Prices offered should be for the entire quantity demanded, partial quantity offers shall straight way be rejected. Conditional offer shall also be considered as non-responsive bidder

11.6 while tendering your quotation, the present trend / inflation in the rate of goods and services in the market should be kept in mind. No request in price due to market fluctuation in the cost of goods and services shall be entered after the bid has been submitted.

#### 12. Bid Currencies

12.1 Prices shall be quoted in Pak Rupees in case of free delivery basis (DDP) delivered duty paid.

12.2 State bank of Pakistan foreign currency selling rate will be considered from the date of opening of financial bid (import cases)

#### 13. Documents Establishing Bidder's

13.1 Pursue an to ITB Clause 9, the Bidder shall furnish, as par to fits bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

**Eligibility and Qualification**

- 13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Procuring agency's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2.
- 13.3 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 offer into 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 with in 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 Supplier'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 qualification criteria listed in the Bid Data Sheet.
  - (e) The procuring agency shall disqualify a bidder if it finds at any time that the bid submitted by, him concerning his qualification as supplier was false and materially inaccurate or incomplete.

**14. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents**

- 14.1 Pursuant to ITB Clause 9, 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.
- 14.2. 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.
- 14.3 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;

- (b) A list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring agency; and
- (c) 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.

14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall not 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.

## 15. Bid Security

15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount specified in the Bid Data Sheet.

15.2 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7. The Bid security 5% of quoted rates in the shape of Pay order / demand draft (refundable to un-successful bidders) in the name of Vice Chancellor, LUMHS, Jamshoro.

15.3 The bid security shall be in Pak. Rupees and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding document so far as other form acceptable to the Procuring agency and valid for thirty (30) days beyond the validity of the bid; or
- (b) irrevocable en-cashable on-demand Bank call-deposit.

15.4 Any bid not secure in accordance with ITB Clauses 15.1 and 15.3 will be rejected by the Procuring agency as non responsive, pursuant to ITB Clause 24.

15.5 Un successful bidders' bid security will be discharged or returned as promptly as possible but not later than thirty(30) days after the expiration of the period of bid validity prescribed by the Procuring agency pursuant to ITB Clause 16.

15.6 The successful Bidder's bid security will be discharged up on the Bidder signing the contract, pursuant to ITB Clause 32, and furnishing the performance security, pursuant to ITB Clause 33.

15.7 The bid security may be forfeited:

(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or

(b) in the case of a successful Bidder, if the Bidder fails:

(i) to sign the contract in accordance with ITB Clause 32;

or

(ii) to furnish performance security in accordance with ITB Clause 33.

#### **16. Period of Validity of Bids**

16.1 Bid shall remain valid for the period specified in the Bid Data Sheet after the date of bid opening prescribed by the Procuring agency, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Procuring Agency as non responsive

16.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in the bidding document.

#### **17. Format and Signing of Bid**

17.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.

17.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a

person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except forum-amended printed literature, shall be initialed by the person or persons signing the bid.

17.3 Any interlineations, erasures, or over writing shall be valid only if they are initialed by the person or persons signing the bid.

17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

#### **D. Submission of Bids**

### **18. Sealing and Marking of Bids**

18.1 The Bidder shall seal the original and each copy of the bidding separate envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." The envelopes shall then be sealed in an outer envelope.

18.2 The inner and outer envelopes shall:

(a) be addressed to the Procuring agency at the address given in the Bid Data Sheet; and

(b) bear the Project name indicated in the Bid Data Sheet, the Invitation for Bids (IFB) title and number indicated in the Bid Data Sheet, and a statement: "DONOTOPEN BEFORE," to be completed with the time and the date specified in the Bid Data Sheet, pursuant to ITB Clause 2.2.

18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late".

18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Procuring agency will assume no responsibility for the bid's misplacement or premature opening.

### **19. Deadline for Submission of Bids**

19.1 Bids must be received by the Procuring agency at the address specified under ITB Clause 18.2 no later than the time and date specified in the Bid Data Sheet.

19.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents in accordance with ITB Clause 7, in which case all rights and

Obligations of the Procuring agency and bidders previously subject to the dead line will thereafter be subject to the deadline as extended.

**20. Late Bids**

20.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency pursuant to ITB Clause 19 will be rejected and returned unopened to the Bidder.

**21. Modification and Withdrawal of Bids**

21.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the dead line prescribed for submission of bids.

21.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and dispatched in accordance with the provisions of ITB Clause 18 by a signed confirmation copy, postmarked not later than the deadline for submission of bids.

21.3 No bid may be modified after the dead line for submission of bids.

21.4 No bid may be withdrawn in the interval between the dead line for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to the ITB Clause 15.7.

**E. Opening and Evaluation of Bids**

**22. 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 20.

- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) 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.
- 22.4 The Procuring agency will prepare minutes of the bid opening.
- 23. Clarification of Bids**
- 23.1 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.
- 24. Preliminary Examination**
- 24.1 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.
- 24.2 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.
- 24.3 The Procuring agency may waive any minor informality, non conformity, 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.
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 25 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 (ITB Clause 15), Applicable Law (GCC Clause 30), and Taxes and Duties (GCC Clause 32), will be deemed to be a material deviation. The Procuring agency's determination of a bid's responsive assist to be based on the contents of the bid itself without recourse to extrinsic evidence.

**25. Evaluation and Comparison of Bids**

- 24.5 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.
- 25.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24.
- 25.2 The Procuring agency's evaluation of a bid will be on delivered duty paid (DDP) price inclusive of prevailing duties and will exclude any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 25.3 The Procuring agency's evaluation of a bid will take into account, in addition to the bid price quoted in accordance with ITB Clause 11.2, one or more of the following factors as specified in the Bid Data Sheet, and quantified in ITB Clause 25.4:
- (a) Incidental costs
  - (b) Delivery schedule offered in the bid;
  - (c) Deviations in payment schedule from that specified in the Special Conditions of Contract;
  - (d) The cost of components, mandatory spare parts, and service; (e) the availability Procuring agency of spare parts and after- sales services for the equipment offered in the bid;
  - (f) The projected operation and maintenance costs during the life of the equipment;
  - (g) The performance and productivity of the equipment offered; and / or
  - (h) Other specific criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.
- 25.4 For factors retained in the Bid Data Sheet pursuant to ITB 25.3, one or more of the following quantification methods will be applied, as detailed in the Bid Data Sheet:
- (a) Incidental costs provided by the bidder will be added by Procuring agency to the delivered duty paid (DDP) price at the final destination.
  - (b) Delivery Schedule.
    - (i) – The Procuring agency enquires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements which will be treated as the base, a delivery “adjustment” will be calculated for bids by applying a percentage, specified in the Bid Data Sheet, of the DDP price for each week of delay beyond the base, and this will be added to the bid price for evaluation. No credit shall be given to early delivery.

**Or**

- (ii) The goods covered under this invitation are required to be delivered (shipped) within an acceptable range of weeks specified in the Schedule of Requirement. No credit will be given to earlier deliveries, and bids offering delivery beyond this range will be treated as non responsive. Within this acceptable range, an adjustment per week, as specified in the Bid Data Sheet, will be added for evaluation to the bid price of bids offering deliveries later than the earliest delivery period specified in the Schedule of Requirements.

**Or**

- (iii) The goods covered under this invitation are required to be delivered in partial shipments, as specified in the Schedule of Requirements. Bids offering deliveries earlier or later than the specified deliveries will be adjusted in the evaluation by adding to the bid price  
A factor equal to a percentage, specified in the Bid Data Sheet, of DDP price per week of variation from the specified delivery schedule.

(c) *Deviation in payment schedule.*

- (i) 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.

**Or**

- (ii) The SCC stipulates the payment schedule offered by The Procuring agency. If a bid deviates from the schedule and if such deviation is considered acceptable to the Procuring agency, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in this invitation, at the rate per annum specified in the Bid Data Sheet.

(d) *Cost of spare parts.*

- (i) The list of items and quantities of major assemblies, components, and selected spare parts, likely to be required during the initial period of operation specified in the Bid Data Sheet, is annexed to the

Technical Specifications. The total cost of these items, at the unit prices quoted in each bid, will be added to the bid price.

**Or**

- (ii) The Procuring agency will draw up a list of high- usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation specified in the Bid Data Sheet. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price.

**Or**

- (iii) The Procuring agency will estimate the cost of spare parts usage in the initial period of operation specified in the Bid Data Sheet, 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) *Spare parts and after sales service facilities in the Procuring agency's country.*

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) *Operating and maintenance costs.*

Since the operating and maintenance costs of the goods under procurement form a major part of the lifecycle 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.*

- (i) Bidders shall state the guaranteed performance or efficiency in response to the Technical Specification. For each drop in the performance or efficiency below then or m of 100, an adjustment for an amount specified in the Bid Data Sheet 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.



Or

- (ii) Goods offered shall have a minimum productivity specified under the relevant provision in the Technical Specifications to be considered responsive. Evaluation shall be based on the cost per unit of the actual productivity of goods offered in the bid, and adjustment will be added to the bid price using the methodology specified in the Bid Data Sheet or in the Technical Specifications.
- (h) *Specific additional criteria indicated in the Bid Data Sheet and/or in the Technical Specifications.*

The relevant evaluation method shall be detailed in the Bid Data Sheet and/or in the Technical Specifications.

**Alternative**

25.4 Merit Point System:

The following merit point system for weighing evaluation Factors Can be applied if none of the evaluation methods listed in 25.4 above has been retained in the Bid Data Sheet. The number of points allocated to each factor shall be specified in the Bid Data Sheet.

*[In the Bid Data Sheet, choose from the range of]*

Evaluated price of the goods	60 to 90
Cost of common list spare parts	0 to 20
Technical features, and maintenance and operating costs	0 to 20
Availability of service and spare parts	0 to 20
Standardization	0 to 20
Total	100

The bids coring the highest number of points will be deemed to be the lowest evaluated bid.

**26. Contacting the Procuring agency**

26.1 Subject to ITB Clause 23, 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 the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.

26.2 Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

**F. Award of Contract**

**27. Post-qualification**

27.1 In the absence of pre qualification, the Procuring agency will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in ITB Clause 13.3.

27.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13.3, as well as such other information as the Procuring agency deems necessary and appropriate.

27.3 An affirmative determination will be a prerequisite for a ward of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.

**28. Award Criteria**

28.1 Subject to ITB Clause 30, the Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

- 29. Procuring agency's Right to Vary Quantities at Time of Award** 29.1 The Procuring agency reserves the right at the time of contract award to increase or decrease, by the percentage indicated in the Bid Data Sheet, the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or terms and conditions.
- 30. Procuring agency's Right to Accept any Bid and to Reject any or All Bids** 30.1 The Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without there by incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Procuring agency's action.
- 31. Notification of Award** 31.1 Prior to the expiration of the period of bid validity, the Procuring agency will notify the successful Bidder in writing by registered letter or by cable, to be confirmed in writing by registered letter, that its bid has been accepted.  
31.2 The notification of award will constitute the formation of the Contract.  
31.3 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 33, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- 32. Signing of Contract** 32.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.  
32.2 Within thirty(30) days of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- 33 Performance Security** 33.1 With in Five (05) days of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.  
33.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 32 or ITB Clause 33.1 shall constitute sufficient grounds for the annul mentor of the award and for feature of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

**34. Corrupt or Fraudulent Practices**

34.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2010 and Rules made there under:

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving or soliciting of anything 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 acts 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) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;

(c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Government-financed contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government-financed contract.

34.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 5.4 and sub-clause 24.1 of the General Conditions of Contract.

**Part One - Section II.**  
**General Conditions of Contract**

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## General Conditions of Contract

### 1. Definitions

- 1.1 In this Contract, the following terms shall be interpreted as indicated:
- (a) "The Contract" means the agreement entered in to between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents in corporate by reference therein.
  - (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
  - (c) "The Goods" means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Procuring agency under the Contract.
  - (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier 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 organization purchase the Goods, as named in SC SCC.
  - (h) "The Procuring agency's country" is the country named in SCC.
  - (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
  - (j) "The Project Site," where applicable, means the place or places named in SCC.
  - (k) "Day" means calendar day.

### 2. Application

- 2.1 These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

**3. Country of Origin**

3.1 All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules and further elaborated in the SCC.

3.2 For purposes of this Clause, "origin" means the place where the Goods were mined, grown, or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.

4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin. Such standards shall be the latest issued by the concerned institution.

**5. Use of Contract Documents and Information; Inspection and Audit by the Government**

5.1 The Supplier 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 Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The Supplier shall not, without the Procuring agency's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.

5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring agency and shall be returned (all copies) to the Procuring agency on completion of the Supplier's performance under the Contract if so required by the Procuring agency.



5.4 The Supplier shall permit the Procuring agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the procuring agency, if so required.

**6. Patent Rights**

6.1 The Supplier 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 Procuring agency's country.

**7. Performance Security**

7.1 Within five (05) days of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3 The performance security shall be denominated in the currency of the Contract acceptable to the Procuring agency and shall be in one of the following forms:

(a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring agency's country, in the form provided in the bidding documents or another form acceptable to the Procuring agency; or

(b) a cashier's or certified check.

7.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than sixty (60) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

**8. Inspections and Tests**

8.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring agency requires and where they are to be conducted. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at

The Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring agency.

8.3 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.

8.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring agency or its representative prior to the Goods' shipment from the country of origin.

8.5 Nothing in GCC clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

## **9. Packing**

9.1 The Supplier 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 nature of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 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.

## **10. Delivery and Documents**

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.

**11. Insurance**

11.1 The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers responsibility.

**12. .**

12.1 The Supplier is required under the Contact to transport the Goods to a specified place of destination within the Procuring agency's country, transport to such place of destination in the Procuring agency's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.

**13. Incidental Services**

13.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Procuring agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

13.2 The supplier shall be required to provide the incidental services has specified in SCC and the cost of which should be included in the total bid price.

**14. Spare Parts**

14.1 As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:
  - (i) advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
  - (ii) following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

## 15. Warranty

- 15.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 A warranty of Two Years will be provided free of cost including parts repair and replacement however incase of high tech equipment if mentioned in the specification the warranty shall be five years free service and parts at the installation site.
- 15.3 The Procuring agency shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Up on receipt of such notice, the Supplier shall, with in the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring agency.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s)

Within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

## **16. Payment**

16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.

16.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Procuring agency, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.

16.4 The currency of payment is Pak Rupees which will be paid after Installation and satisfactory report by inspection committee for duty delivered pay free delivery at the consignee end In case of import cases pay will be made 100% via establishing LC at sight and receiving shipping doc / bill of lading, inspection, certificate of the manufacturers country of origin, compliance of international standards of quality.

## **17. Prices**

17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid and shall remain the same till expiry of original bids validity period provided the procuring agencies bid validity extension.

## **18. Change Orders**

18.1 The Procuring agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring agency;
- (b) the method of shipment or packing;
- (c) the place of delivery; and/or
- (d) the Services to be provided by the Supplier.

18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be

Made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring agency's change order.

**19. Contract Amendments**

19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

**20. Assignment**

20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under this Contract, except with the Procuring agency's prior written consent.

**21. Subcontracts**

21.1 The Supplier shall notify the Procuring agency in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2 Sub contracts must comply with the provisions of GCC Clause 3.

**22. Delays in the Supplier's Performance**

22.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.

22.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

**23. Liquidated**

23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or

## **Damages**

all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages leveled at the rate of two percent (2%) per month or a fraction thereof subject to a maximum of ten percent (10%) of the P.O / contract price / a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 24.

## **24. Termination for Default**

24.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 22; or
- (b) if the Supplier fails to perform any other obligation(s) under the Contract.
- (c) if the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.

“Fraudulent practice” means a misrepresentation of facts in order to influence a procurement processor the execution of a contract to the detriment of the Borrower, 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 Borrower of the benefits of free and open competition.

24.2 In the event the Procuring agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those

undelivered, and the Supplier shall be liable to the Procuring agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

**25. Force Majeure**

25.1 Notwithstanding the provisions of GCC Clauses 22,23,and24, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

25.2 For purposes of this clause,“ Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**26. Termination for Insolvency**

26.1 The Procuring agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bank corrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring agency.

**27. Termination for Convenience**

27.1 The Procuring agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring agency’s convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

27.2 The Goods that are complete and ready for shipment within thirty(30) days after the Supplier’s receipt of notice of termination shall be accepted by the Procuring agency at the



Contract terms and prices. For the remaining Goods, the Procuring agency may elect:

- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
- (b) To cancel their main demand pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

**28. Resolution of Disputes**

28.1 The Procuring agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

28.2 If, after thirty (30) days from the commencement of such informal negotiations, the Procuring agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanism may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed manner and/or arbitration.

**29. Governing Language**

29.1 The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchange by the parties shall be written in the same language.

**30. Applicable Law**

30.1 The Contract shall be interpreted in accordance with the laws of the Procuring agency's country, unless otherwise specified in SCC.

**31. Notices**

31.1 Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

31.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

**32. Taxes and Duties**

32.1 Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.

All taxes are applicable as per government .

**33. Turnkey basis**

- The Purchaser will evaluate and compare bids on turnkey basis design/equipment, installation, commission and training and services. Equipment will purchase on the package basis.
- Equipment must be quoted with all the standard accessories.
- UPS/Power protection for the equipment shall be incorporate in the system or must be quoted separately.

(For complete accessories of equipment each section must complete quoted)

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**CONTRACT PERFORMANCE BOND**

(Bank Guarantee on stamp paper at the rate prescribed by Government of Pakistan)

Guarantee No. \_\_\_\_\_  
Executed on \_\_\_\_\_  
Expiry Date \_\_\_\_\_

**Letter by the Guarantor (Bank) to the Employer (University)**

Name of Guarantor (Bank) with Address:

\_\_\_\_\_

Name of Principal (Contractor) with address:

\_\_\_\_\_

Penal Sum of Security (Bond), (in words and figures)

\_\_\_\_\_

Letter of Acceptance No. \_\_\_\_\_ Dated \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the Tender Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal (Contractor) we, the Guarantor above named, are held and firmly bound unto the Chairman, CPC , LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, Jamshoro, Sindh, acting through the Chairman, Central Purchase Committee LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, Jamshoro {hereinafter called the Employer (University)} in the penal sum of amount stated above for the payment of which sum well and truly to be made to the said Employer (University), we bind ourselves, our heirs, executors, administrators and successors, jointly and severely, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal (Contractor) has accepted the Employer's (University's) above said Letter of Acceptance

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer (University), with or without notice to the Guarantor, which notice is hereby waived and shall also well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the Contract and of any and all modifications of the said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till the expiry of the guaranty period as per Clause of the Conditions of Contract.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, \_\_\_\_\_ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer (University) without delay upon the Employer's (University's) first written demand without cavil or arguments and without requiring the Employer (University) to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's (University's) written declaration that the Principal (Contractor) has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to the Employer's (University's) designated Bank and Account Number.

PROVIDED ALSO THAT the Employer (University) shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling the said obligations, and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer (University) forthwith and without any reference to the Principal (Contractor) or any other person.

IN WITNESS WHEREOF, the above bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body

\_\_\_\_\_

Guarantor (Bank)

**Witness:**

/

1. \_\_\_\_\_  
(Signature)

1. Signature \_\_\_\_\_

\_\_\_\_\_  
Corporate Seal)

2. Name \_\_\_\_\_

2. \_\_\_\_\_  
(Signature)

3. Title \_\_\_\_\_

\_\_\_\_\_  
(Name, Title, Address)

\_\_\_\_\_  
(Corporate Guarantor Seal)

/

/

## ARTICLES OF AGREEMENT

**This Agreement** made this \_\_\_\_\_ day of \_\_\_\_\_ 2018, by and between the Chairman, CPC, LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, located at Jamshoro, Sindh, including his successors in office and Assignees / Agents, acting through the Chairman, Central Purchase Committee LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, hereinafter called the “**University**”, of the one part,

**And**

of

(name and designation of the authorized person)

, located at

hereinafter called the “**Contractor**” which expression shall include their successors, legal representatives of the second part.

Whereas the **University** Requires Office Appliance / Furniture / Lab Equipment

at Jamshoro. Whereas the **Contractor** has agreed to supply, install, put into operation and demonstrate the working of the said work valued at Rs.

(amount in figures and

words)

in the period of \_\_\_\_\_ months, subject to the terms and conditions set forth, hereinafter, which have been accepted by the **Contractor**

**Now this Agreement witnesses as follows:**

1. In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the **Conditions of Contract** hereinafter referred to.
2. The following documents which, for the purpose of identification, have been signed by \_\_\_\_\_ on behalf of the **Contractor**, and by \_\_\_\_\_ (name and designation of the authorized person) on behalf of the **University**, all of \_\_\_\_\_ (name and designation of the authorized person) this shall be deemed to form and be read as a part of this Agreement viz.:
  - a) Articles of Agreement;
  - b) Instructions to Tenderer;
  - c) Conditions of Contract;
  - d) Contractor’s Offer including the relevant correspondence prior to signing of this Agreement with all Annexure duly filled in;
  - e) The specifications of the equipment and other related items;
  - f) Bill of Quantity with prices.
3. In consideration of the payment to be made to the Contractor, the **Contractor** hereby **covenants** with the **University** **to supply**, deliver, install, put into operation and demonstrate the working of the items in conformity in all respects of the Contract.
4. The **University** hereby **covenants to pay** the Contractor in consideration of the supply, delivery, installation, putting into operation and demonstration of the working of the items, the contract price in the manner prescribed by the Contract and approved by the University.

**In Witness Thereof** the parties have hereunto set their respective hands and seals, the day, month and year first above written.

**Vice Chancellor LUMHS**

Signature \_\_\_\_\_

Name: \_\_\_\_\_

**WITNESSES:**

University Witness No.1: Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

University Witness No.2: Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

**Contractor**

Signature \_\_\_\_\_

Name: \_\_\_\_\_

Contractor's Witness No.1: Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Contractor's Witness No.2: Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

**NIT**

LUMHS, Jamshoro



- Form – 1. - Application Letter
- Form-2 - General information of FIRM
- Form-3 - list of similar Projects/Procurements
- Form-4 - Details of Technical Staff
- Form-5 - Financial Standings/Obligations/GST/Income Tax.



LUMHS, Jamshoro



**Form 1**

Letter of Application

Registered Business Name:

Registered Business Address:

Telephone & FAX:

To: Chairman, Central Purchase Committee  
LUMHS, Jamshoro.

Sir,

I/We hereby apply for Procurement Services at LUMHS, Jamshoro as a registered Firm/Individual.

I/We authorize LUMHS or its authorized representatives to conduct any investigation to verify the statements, documents and information submitted and to clarify the financial and technical aspects of this application, from any person, bank, department, agency or firm.

The names and positions of the contact persons at our firm, who may be contacted for further information, if required are as follows:

Abc

Xyz

LUMHS, Jamshoro



I/We hereby declare that

The statements made and the information provided in the application are complete, true and correct in every detail,

This firm has never been black listed by any Government / Autonomous bodies or private company or corporation and not involved in any litigation, arbitration with any client.

Faithfully

Authorized Representative of applicant

Official seal

Dated

LUMHS, Jamshoro



## **Form – 2**

General information

Name of Company

Type of company

Status of company

Year of incorporation/establishment

Head office address

Telephone Nos

Fax Nos

E-mail address

Branch offices

Telephone No.

E-mail address

Attachments required

Attested copies of registration and ownership certificates of the FIRM

Detailed company profile must include main line of business, response time & after sale support statement, major client list, affiliation with international vendors and available resources for project execution.

**Name / designation/signature of**

**Authorized Person**

**Form – 3**

Details of Similar Nature Projects

S.N	Nature/Name of Project Procurement	Cost of Project	Name & Address of Company	Name & Designation of Contact person	Contact Details of the firm
<b>Projects</b>					

Note: List Down Projects most recently done on top

Name/Designations/Signature of  
Authorized Person

LUMHS, Jamshoro



**Form – 4**

Details of Technical Staff

S.No.	Name	Designation	Education	Type of Experience	Years of Experience

Name/Designation/Signature of  
Authorized Person.

LUMHS, Jamshoro



**Form – 5**

Financial Standing / Registration/Pre-qualification/Obligation/GST/bank statement/Audited accounts all documentary evidences.

Annual Turnover of the last 3 (years)

Applicants are required to submit the following along with their applications

**GST/INCOME TAX:**

Registration Nos. along with copy of registration certificates.

**Registration:**

Registration details with Govt/Semi-Gove/Private/Autonomous bodies.

**Obligations:**

List of litigation or arbitration cases, if any, with result thereof, if finalized.

**Workshop or Maintenance facilities:**

The Applicant has got proper workshop/Maintenance facilities along with human resource available, the location must be specified for inspection of necessary.

**Name/Designation/Signature of**

**Authorized Person**