

Tender No:

KDU/PRO/CAP/SFF/ 117 /2020



General Sir John Kotelawala Defence University,  
Kandawala Estate, Ratmalana,  
Sri Lanka.  
T: Phone: 2632028 , 2622995  
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Web: www.kdu.lk

29 / 05 / 2020

**INVITATION TO BID AND GENERAL CONDITIONS OF TENDER**

1. The Vice Chancellor of the General Sir John Kotelawala Defence University, as the Chairman, Department Procurement Committee Invites Bid/s from prospective Bidders for supply of **item/s listed in the schedule in Annex “A”. The relevant specifications of the item/s are indicated in Annex “B”.**

2. **CLOSING DATE & TIME.** The tender will close at 1000 hrs. on 25/06/2020. Any Bid submitted after the closing time of the tender will be rejected & unopened such bids will be returned to the bidder.

3. **VALIDITY OF BID.** The bid submitted under this tender **must be valid for a period of 120 days from the date of closing of tender.**

4. **BID BOND / GUARANTEE.**

(a) If the quoted bid value exceeds Rs: 2,000,000.00, such Bids should be accompanied with 1% of Bid Value an “on demand” and “unconditional” Bid Bond/Guarantee for a sum of **Rs: .....** in the format given in Annex “C” through a recognized local Bank or Insurance Company registered in Sri Lanka which is authorized by the Insurance Board of Sri Lanka to issue such Bid Guarantees. All Bid Bond/Guarantees should be valid for at least 30 days more than the validity period of bids, ie, for 150 days from the date of Bid opening. **Cheques will not be accepted as Bid Guarantee.**

(b) Submission of insufficient Bid Bond/Guarantee value or period will be considered as a “**major deviation**” and such offer will not be considered for further procurement action and will be rejected.

5. **VALUE ADDED TAX.** The Bidders who bid for locally delivered items must have the VAT registration. The VAT portion must be shown separately in the price schedule in Annex “A” and VAT registration number must be indicated. If the quoted item is exempted from VAT or Bidding Company is not liable for VAT, reference number and date of relevant Act number/Gazette notification/a certificate (as applicable) **issued for the current financial year** from the Commissioner General of Inland Revenue to that effect should be submitted along with the Bid.

6. **BID SUBMISSION.** The **bidder must duly sign at the last page (before Annexes) of this document** indicating the name of the signatory and the name of the company & place the company common seal to confirm the acceptance of tender conditions. **The Bid/s that do not include authorized signature will be rejected.** The Bid/s duly signed by the bidder enclosed and sealed in an appropriate cover addressed to the following address should be sent by registered post or could be deposited in the **appropriate tender box placed at General Sir John Kotelawala Defence University, Kandawala Estate, Ratmalana** (at the Main Entrance of General Sir John Kotelawala Defence University) on or before the time & date specified for the closing of tender. **The tender reference number, date & time of closing tender should be indicated & underlined at the top left corner of the envelop.**

**Tender Ref No** :.....

**Closing Date & Time** :.....

The Chairman,  
Department Procurement Committee,  
General Sir John Kotelawala Defence University,  
Kandawala Estate, Ratmalana,  
Sri Lanka.

7. The Bid/s must be submitted in the attached schedule of prices in Annex “A” as applicable. However, bidders could use similar formats prepared with their own letter heads with all the details mentioned therein and submit in **three copies along with duly signed copy of a General Conditions of tender.** The Bid/s must contain **Technical Literature, Pamphlets, Drawings and Quality Standard Certificate etc** necessary to determine characteristics of items offered and in case of Machinery/Vehicles & Equipment, servicing and workshop data/after sales service, back up facilities or any other facilities provided by the supplier.

8. **SUBMISSION OF SAMPLES/PAYMENT OF TESTING CHARGES.**

When it is required to submit samples, **every offer** must be accompanied with pre - marked samples. The marking of samples **indicating the Bidder & Offer number** must be done and the samples must be handed over to the officer at same place where tender box is placed **on or before the closing date & time of the Bid.** Samples submitted after closing time of the Bid will be rejected. The documents such as Air Way Bills etc, will not be accepted in place of samples. When the testing charges are required to be paid, bidders shall pay testing charges separately **for all offers** indicated in their bid/s.

(1) **Samples.** Please submit ..... samples.

(2) **Testing Charges.** A sum of Rs. .... **per offer** must be paid to the Bursar of KDU, prior to the submission of bid and a copy of the receipt must be annexed to the bid. It is the responsibility of bidder to inform the Cashier of the Account Office to note the tender number on the receipt issued for such payments.

8. **BID OPENING.** All duly received bids **will be opened immediately after the scheduled closing time of Bids at the same venue.** Bidders or their accredited agents could be present at the time of opening of bids.

9. **PRICES.**

For locally delivered items (including locally manufactured items & foreign items imported by the bidders) price must be quoted in Sri Lankan Rupees, inclusive of all charges for delivery of items to General Sir John Kotelawala Defence University Ratmalana, Faculty of Allied Health Science (FAHS) Werahera and University Hospital Werahera or Southern Campus Sooriyawewa. **Unit price, VAT and Total price should be clearly indicated in schedule in Annex “A”.** Other than VAT, all other type of taxes (eg : NBT, BTT, etc.) should not be indicated separately and should be included in unit price.

10. **RESTRICTED TENDERS.**

Invitation to Bids are circulated among the registered suppliers with Ministry of Defence (MOD), only bids submitted by registered suppliers will be allowed for consideration. However, Chairman, Department Procurement Committee reserves the right to invite the bids from multiple combinations of Procurement Methods as stipulated in Chapter III of the Government Procurement Guideline, 2006 to ensure highest competitiveness.

11. **PERFORMANCE BOND/GUARANTEE.**

A successful bidder shall furnish a Performance Bond/Guarantee in the form of “On Demand” & “Unconditional” Bank/Insurance Guarantee for a sum equivalent to 10% of the contract value for every contract that exceeds Rs. 500,000.00 or equivalent amount in foreign currency through a recognized Commercial Bank registered in Sri Lanka or through an Insurance Company authorized by the Insurance Board of Sri Lanka to issue such Performance Guarantee for this purpose, **within two weeks from the date of notification of award.** The proceeds of the Performance Bond/Guarantee shall be payable to the Vice Chancellor of the General Sir John Kotelawala Defence University as compensation for any loss resulting from the supplier’s failure to complete his performance obligations under the contract. If the contracted supplier fails to deliver the items on time or fails to complete the works as per the agreed contract, **THE TOTAL VALUE OF THE PERFORMANCE BOND/GUARANTEE** will be forfeited. If only partial delivery is made during the agreed contract period, the corresponding value percentage of undelivered quantity from the Performance Bond/Guarantee will be forfeited.

12. **SIGNING OF CONTRACT.**

The notification of award will be transmitted to the successful bidder by post, by fax or e-mail. This notification constitutes the formation of the contract. The successful bidder should submit his written acceptance for the award and performance bond / guarantee (For awards over Rs. 500,000.00 without VAT) within 14 days of receipt of such notification. Upon acceptance of the award and furnishing of the Performance Bond/Guarantee, the successful bidder will have to enter into a formal contract with the Vice Chancellor of the General Sir John Kotelawala Defence University by signing the Contract.

13. **DELIVERY.**

Preference will be given for early delivery. In case of bulk supplies for locally manufactured items, the delivery of **total quantity must be completed within 120 days of signing of contract,** unless mutually agreed for extended delivery period with General Sir John Kotelawala Defence University. **The bidder/s must indicate the proposed delivery schedule in Annex “D”.** In the event of placing a purchase order with the successful bidder, the total quantity so ordered must be supplied as one consignment unless part deliveries are agreed upon in the contract. The deliveries not made as per agreed delivery schedule will be considered as bad performances by the suppliers and **no extended delivery period will be authorized.** Under extreme unavoidable conditions too, the Chairman, Department Procurement Committee (Vice Chancellor of the General Sir John Kotelawala Defence University) reserves the right to grant or refuse delivery period extensions only within the current financial year with or without liquidated claim for delayed deliveries and that decision will be final.

14. **LIQUIDATED DAMAGES.**

In case of delivery period extensions requested by the successful bidder, a sum equivalent to 1% of the total value of the delayed supply per delay of one week or part thereof may be deducted from the payment due to the supplier from the General Sir John Kotelawala Defence University as liquidated damages up to the maximum limit of 12% of the total value of delayed supplies.

15. **PAYMENT TERMS FOR LOCALLY DELIVERED ITEMS.**

Payment will be made after acceptance of items which should be subjected to a pre-acceptance inspection/testing by General Sir John Kotelawala Defence University authorities. The delivery made to the General Sir John Kotelawala Defence University should not be considered as quantities taken over by General Sir John Kotelawala Defence University until items are properly accepted after pre-acceptance inspection. Any item that does not conform to the specifications or already approved sample will be rejected & it is the responsibility of the supplier to remove them from General Sir John Kotelawala Defence University stores/premises within 07 working days of such intimation (either verbal or written) at his own cost and replace them with items conforming to specification within one month of such rejection. The bidder shall allow approximately 60-90 days’ period of credit from the date of acceptance of items for Account Office, General Sir John Kotelawala Defence University to obtain liquid cash from General Treasury & release the payment.

16. **RIGHTS OF THE PROCUREMENT COMMITTEE.**

The Department Procurement Committee reserve the right to accept or reject whole or part of this tender and their decision will be final. The successful bidders will be notified. Information with regard to rejected or unsuccessful bids will not be communicated.

Thanking You,  
Yours faithfully,

J D B Galagoda  
For Vice Chancellor  
General Sir John Kotelawala Defence University

I/We agree to abide by the conditions of tender and undertake to supply the items as per delivery schedule mentioned in the contract, in the event of an order been placed with me/my firm/company as a result of this tender.

..... Signature

..... Name of Signatory

.....Name of the Company/Bidder

Date :- .....

Company seal

**SCHEDULE OF PRICES FOR LOCALLY DELIVERED ITEMS**

S/N	ITEMS	DENO	QTY	PRICE EACH SLRS	TOTAL PRICE SLRS
	<b><u>PURCHASE LAB EQUIPMENT FOR ELECTRICAL AND ELECTRONIC ENGINEERING DEPARTMENT(05)</u></b>				
01	IX-EEG Recorder and EEG cap	set	01		
02	iWire –BIO4 4-Channel Bio potential recorder	set	01		
03	IX-100BE Data Acquisition System	set	01		
04	MP36R 4-Channel Systems and BIOPA Celectrodes	set	01		
05	EWH's ECG Simulator Kit	Nos	10		
06	Nuclear science lab equipment	Nos	01		
	<i>As per attached specification</i>				
	TOTAL				
	DISCOUNT				
	TOTAL(AFTER DISCOUNT)				
	VAT %				
	<b>GRAND TOTAL</b>				

**(A) OTHER DETAILS**

- (i) DELIVERY PERIOD - .....
- (ii) MAKE & MODEL - .....
- (iii) VALIDITY PERIOD - .....
- (iv) WARRANTY PERIOD - .....
- (v) PAYMENT TERMS - CREDIT
- (vi) COUNTRY OF ORIGIN - .....
- (vii) DISCOUNT IF ANY - .....
- (viii) ANY OTHER TAXES - .....

**(B) VAT DETAILS**

- VALUE ADDED TAX PERMANENT REGISTRATION CERTIFICATE / VAT EXEMPTION LETTER ISSUED BY DEPARTMENT OF INLAND REVENUE TO BE ATTACHED

**(C) PLACE OF DELIVERY**

- ITEMS TO BE DELIVERED TO THE "GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY, KANDAWALA STATE, RATMALANA ALONG WITH THE COPY OF ORDER AND RELEVANT INVOICE.

- (D) Any queries / information with regard to this procurement / tender could be obtained from Officer Commanding Logistics Services office at General Sir John Kotelawala Defence University through e-mail [ocls@kdu.ac.lk](mailto:ocls@kdu.ac.lk) and by telephone number 0112622504 during working hours.

**NOTE: UNIT PRICE AND TOTAL PRICE ARE TO BE INDICATED CLEARLY IN THE TENDER, IF NOT QUOTATION WILL BE REJECTED.**

SUPPLIER NAME - .....

ADDRESS - .....

Company Seal

(E) Bid Reference: KDU/PRO/CAP/SFF/ 117/2020

.....  
DATE

**Specifications for IX-EEG Recorder and EEG Cap**

1. **Work scope**

Supply, installation and commissioning of an IX-EEG Recorder and an EEG Cap for KDU. The IX-EEG system consists of the IX-EEG recorder and the LabScribe acquisition and analysis software, including the EEG analysis module.

2. All equipment and material supplied should suit the following conditions.

a. **Climatic / Operating Conditions (Fully tropical conditions)**

Max. Ambient Temp.	-	40 C°
Ave. Ambient Temp	-	35 C°
Ave. Relative humidity	-	70% - 90 %

b. **System Parameters**

EEG Cap (A-EEG-CAP-LM)	10-20 electrode EEG cap
<b>INPUTS</b>	
EEG inputs	19 channels of EEG, using a 10-20 EEG cap (Ag/AgCl electrodes recommended)
Bio potential inputs	2 channels for ECG, EMG, EOG, etc.
GSR input	1 channel
Event Marker	1 channel
<b>A/D CONVERTER</b>	
Input range	+/- 180 mV
Sampling speed	500 samples/second per channel simultaneous
Resolution	24 bit
System noise	1 uV p-p input shorted noise at 100 samples/sec 2 uV p-p input shorted noise at 500 samples/sec
Interface	USB
<b>GENERAL</b>	
Power	USB
Enclosure and dimensions	Plastic; 10 cm W, 12 cm D, 3 cm H
Software	LabScribe with EEG analysis module Preset

standard montages
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3. **Laboratory experiments to be facilitated**

The proposed IX-EEG Recorder System shall be capable for conducting following laboratory module topics related Medical Instrumentation and Biomedical Digital Signal Processing.

- (a) Human Heart
  - (i) Electrocardiogram (ECG) and Peripheral Circulation
  - (ii) Exercise, the ECG and Peripheral Circulation
  - (iii) Heart Rate Variability
  - (iv) Six Lead ECG
  - (v) Human Muscle
- (b) Electromyogram Activity in Antagonistic Muscles
  - (i) EGG and Growling stomach
  - (ii) Electromyogram (EMG) Activity while Arm Wrestling
  - (iii) Oculomotor Muscle Activity
  - (iv) Human Psychophysiology
- (c) Galvanic Skin Response and Emotion
  - (i) Galvanic Skin Response and Deception, Cognitive Compliance and Vigilance
  - (ii) The Galvanic Skin Response (GSR) and Investigation into 'Cheating'
  - (iii) Facial Electromyograms (EMG) and Emotion
  - (iv) The Stroop Effect – Interference of Stimuli on Associative Tasks
  - (v) Visual Evoked Potentials (VEP)
  - (vi) Hypothesis-driven Biofeedback Lab/Research Study
- (d) ERP: Event Related Potentials

4. **Documents to be supplied (In English)**

- a. With the offer
  - i. Comprehensive manufacturer's technical literature for the system.
  - ii. Reference for the used cases at reputed academic institution in similar or higher capacities.
  - iii. Manufacturers Authorization.
  - iv. Brief description of the laboratory modules which can be carried out under the topics mentioned at above para 3.
  - v. Manufactures certification on the OEM support/spare parts availability for 10 years from the date of supply of the item.
  - vi. Company profile of the supplier with.
- b. With delivery of the system,
  - i. Comprehensive manufacturer's technical literature.
  - ii. User Guides.

- iii. 03 sets of Instructor Guides.
- iv. 02 sets of students Manual for each module

**Warranty**

Minimum of Three (3) years from the date of commissioning should be provided. If free services are provided, same should be clearly indicated. Warranty period will be extended by the total non-operational days owing to warranty defects.

**6. Agreement**

Successful bidders will be required to enter into an agreement with the KDU on matters pertaining to supply, installation, commissioning, warranty and after sales service support for minimum of 10 years.

**7. Training**

- a. 03 No's Lectures/instructors are to be trained at local agent's workshop for a duration of minimum 03 working days on conducting laboratory modules on the system.
- b. Onsite training program for 02 Technical Officers during installation.

**8. Place of Delivery**

System to be delivered to the laboratory at, KDU along with the copy of order and relevant invoice. For quality control checks supplier should arrange a joint quality control check at the laboratory on completion of the installation.

**9. Financial**

- a. delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

### Specifications for iWire-BIO4 4-Channel Biopotential iWire Recording Module

#### 1. Work scope

Supply, installation and commissioning of an iWire-BIO4 4-Channel Biopotential iWire Recording Module for KDU. The system is capable to measure 4 bio potentials such as ECG, EMG.

2. All equipment and material supplied should suit the following conditions.

#### a. Climatic / Operating Conditions (Fully tropical conditions)

Max. Ambient Temp.	-	40 C°
Ave. Ambient Temp	-	35 C°
Ave. Relative humidity	-	70% - 90 %

#### b. System Parameters

<u>INPUTS</u>	
Analog Inputs	4 Biopotential
Input Range	2400mV, 1200mV, 800mV, 400mV, 200mV, 100mV, 50mV, 25mV, 12mV
<u>A/D CONVERTER</u>	
Sampling Speed	20k Samples/sec per channel simultaneous
System noise	< 6 microVolts
Interface	iWire
<u>GENERAL</u>	
Power	iWire

#### 3. Laboratory experiments to be facilitated

The proposed IX-EEG Recorder System shall capable for conducting following laboratory module topics related Medical Instrumentation, Biomedical Digital Signal Processing and project based modules.

- (i) Animal Muscle
- (ii) Animal Nerve
- (iii) Human Circulation
- (iv) Human Heart

- (v) Human Muscle  
(vi) Human Nerve  
(vii) Human Psychophysiology

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4. **Documents to be supplied (In English)**

a. With the offer

- i. Comprehensive manufacturer's technical literature for the system.
- ii. Reference for the used cases at reputed academic institution in similar or higher capacities.
- iii. Manufacturers Authorization.
- iv. Brief description of the laboratory modules which can be carried out under the topics mentioned at above para 3.
- v. Manufactures certification on the OEM support/spare parts availability for 10 years from the date of supply of the item.
- vi. Company profile of the supplier with.

b. With delivery of the system,

- i. Comprehensive manufacturer's technical literature.
- ii. User Guides.
- iii. 03 sets of Instructor Guides.
- iv. 02 sets of students Manual for each module

5. **Warranty**

Minimum of Three (3) years from the date of commissioning should be provided. If free services are provided, same should be clearly indicated. Warranty period will be extended by the total non-operational days owing to warranty defects.

6. **Agreement**

Successful bidders will be required to enter into an agreement with the KDU on matters pertaining to supply, installation, commissioning, warranty and after sales service support for minimum of 10 years.



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7. Training

- a. 03 No's Lectures/instructors are to be trained at local agcat's workshop for a duration of minimum 03 working days on conducting laboratory modules on the system.
- b. Onsite training program for 02 Technical Officers during installation.

8. Place of Delivery

System to be delivered to the laboratory at, KDU along with the copy of order and relevant invoice. For quality control checks supplier should arrange a joint quality control check at the laboratory on completion of the installation.

9. Financial

- |    |                  |   |   |
|----|------------------|---|---|
| a. | delivery period  | - | Bidders to indicate. (Shorter delivery period will be preferred.)                             |
| b. | Validity period  | - | To be indicated by the bidders.   |
| c. | Discounts if any | - | To be indicated by the bidders.   |
| d. | Any other taxes  | - | To be indicated by the bidders.   |
| e. | Vat details      | - | VAT registration no/ exemption letter issued by department of in land revenue to be attached. |

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### Specifications for IX-100BE Data Acquisition System

#### 1. Work scope

Supply, installation and commissioning of an IX-100BE Data Acquisition System for KDU. The system provides high resolution/low noise recording of biopotential signals for OEM applications.

2. All equipment and material supplied should suit the following conditions.

#### a. Climatic / Operating Conditions (Fully tropical conditions)

Max. Ambient Temp.	-	40 C°
Ave. Ambient Temp	-	35 C°
Ave. Relative humidity	-	70% - 90 %

#### b. System Parameters

INPUTS	
No. of Channels	1
Input Range	Software Configurable
Resolution	16 Bit
Sampling Speed	200 kHz
High Pass Filters	Software Configurable
Low Pass Filters	Software Configurable
Isolation	3 kV
Connector	IEC-60601-1 Touch Proof
GENERAL	
Power	5 VDC 2.6A
Interface	USB
Software	LabScribe2 Recording and Analysis Software

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3. **Laboratory experiments to be facilitated**

The proposed IX-100BE Data Acquisition System shall be capable for conducting experiments related to Engineering Product Design module and Final Year Project module. It has a capacity of testing embedded biomedical and life science applications where only one bio potential recording channel is required.

4. **Documents to be supplied (In English)**

a. With the offer

- i. Comprehensive manufacturer's technical literature for the system.
- ii. Reference for the used cases at reputed academic institution in similar or higher capacities.
- iii. Manufacturers Authorization.
- iv. Brief description of the laboratory modules which can be carried out under the topics mentioned at above para 3.
- v. Manufacturer's certification on the OEM support/spare parts availability for 10 years from the date of supply of the item.
- vi. Company profile of the supplier with.

b. With delivery of the system,

- i. Comprehensive manufacturer's technical literature.
- ii. User Guides.
- iii. 03 sets of Instructor Guides.
- iv. 02 sets of students Manual for each module

5. **Warranty**

Minimum of Three (3) years from the date of commissioning should be provided. If free services are provided, same should be clearly indicated. Warranty period will be extended by the total non-operational days owing to warranty defects.

6. **Agreement**

Successful bidders will be required to enter into an agreement with the KDU on matters pertaining to supply, installation, commissioning, warranty and after sales service support for minimum of 10 years.

**7. Training**

- a. 03 No's Lectures/instructors are to be trained at local agent's workshop for a duration of minimum 03 working days on conducting laboratory modules on the system.
- b. Onsite training program for 02 Technical Officers during installation.

**8. Place of Delivery**

System to be delivered to the laboratory at, KDU along with the copy of order and relevant invoice. For quality control checks supplier should arrange a joint quality control check at the laboratory on completion of the installation.

**9. Financial**

- a. delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of inland revenue to be attached.

## Specifications for MP36R 4-Channel Systems and BIOPAC Electrodes

### 1. Work scope

Supply, installation and commissioning of an MP36R 4-Channel Systems and BIOPAC electrodes for KDU. The system provides a four-channel data acquisition system for life science research

2. All equipment and material supplied should suit the following conditions.

#### a. Climatic / Operating Conditions (Fully tropical conditions)

Max. Ambient Temp.	-	40 C°
Ave. Ambient Temp	-	35 C°
Ave. Relative humidity	-	70% - 90 %

#### b. System Parameters

No. of Channels	4
Software	AcqKnowledge 4 software (Windows or Mac)
BSL-ACCPACK(BIOPAC electrodes)	100 x Disposable electrodes (EL503), 10 x Disposable EDA (GSR) electrodes (EL507), 1 x Disposable bacteriological filter (AFT1), 1 x Disposable Mouthpiece (AFT2), 1 x Nose clip (AFT3), 5 x abrasive pads (ELPAD)

### 3. Laboratory experiments to be facilitated

The proposed IX-100BE Data Acquisition System shall be capable for conducting experiments related to Engineering Product Design module and Final Year Project module. It has a capacity of testing biomedical and life science instrument design where capable of automated analysis routines for ECG, IRV, EEG, EMG, EGG.

4. **Documents to be supplied (In English)**

- a. With the offer
- i. Comprehensive manufacturer's technical literature for the system.
  - ii. Reference for the used cases at reputed academic institution in similar or higher capacities.
  - iii. Manufacturers Authorization.
  - iv. Brief description of the laboratory modules which can be carried out under the topics mentioned at above para 3.
  - v. Manufactures certification on the OEM support/spare parts availability for 10 years from the date of supply of the item.
  - vi. Company profile of the supplier with.
- b. With delivery of the system,
- i. Comprehensive manufacturer's technical literature.
  - ii. User Guides.
  - iii. 03 sets of Instructor Guides.
  - iv. 02 sets of students Manual for each module

5. **Warranty**

Minimum of Three (3) years from the date of commissioning should be provided. If free services are provided, same should be clearly indicated. Warranty period will be extended by the total non-operational days owing to warranty defects.

6. **Agreement**

Successful bidders will be required to enter into an agreement with the KDU on matters pertaining to supply, installation, commissioning, warranty and after sales service support for minimum of 10 years.

7. **Training**

- a. 03 No's Lectures/instructors are to be trained at local agent's workshop for a duration of minimum 03 working days on conducting laboratory modules on the system.
- b. Onsite training program for 02 Technical Officers during installation.

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**8. Place of Delivery**

System to be delivered to the laboratory at, KDU along with the copy of order and relevant invoice. For quality control checks supplier should arrange a joint quality control check at the laboratory on completion of the installation.

**9. Financial**

- |    |                  |   |
|----|------------------|---|
| a. | delivery period  | - Bidders to indicate. (Shorter delivery period will be preferred.)                             |
| b. | Validity period  | - To be indicated by the bidders.   |
| c. | Discounts if any | - To be indicated by the bidders.   |
| d. | Any other taxes  | - To be indicated by the bidders.   |
| e. | Vat details      | - VAT registration no/ exemption letter issued by department of in land revenue to be attached. |

### Specifications for EWH's ECG Simulator Kit

#### 1. Work scope

Supply, installation and commissioning of ten (10) EWH's ECG Simulator Kit for KDU. The EWH's ECG Simulator Kit can generate three important ECG signals: left arm (LA), right arm (RA) and left leg (LL). This kit is also suitable for classroom electronics teaching in bio signals.

2. All equipment and material supplied should suit the following conditions.

##### a. Climatic / Operating Conditions (Fully tropical conditions)

Max. Ambient Temp.	-	40 C°
Ave. Ambient Temp	-	35 C°
Ave. Relative humidity	-	70% - 90 %

##### b. System Parameters

Ten (10) EWH's ECG Simulator Kits with relevant components.

#### 3. Laboratory experiments to be facilitated

The proposed EWH's ECG Simulator Kit shall capable for providing hands on experience on ECG simulator and used in teaching on ECG signals in Medical Instrumentation module.

#### 4. Documents to be supplied (In English)

##### a. With the offer

- i. Comprehensive manufacturer's technical literature for the system.
- ii. Reference for the used cases at reputed academic institution in similar or higher capacities.
- iii. Manufacturers Authorization.
- iv. Brief description of the laboratory modules which can be carried out under the topics mentioned at above para 3.
- v. Manufactures certification on the OEM support/spare parts availability for 10 years from the date of supply of the item.
- vi. Company profile of the supplier with.

##### b. With delivery of the system,

- i. Comprehensive manufacturer's technical literature.
- ii. User Guides.



- iii. 03 sets of Instructor Guides.
- iv. 02 sets of students Manual for each module

### Warranty

Minimum of one year from the date of commissioning should be provided. If free services are provided, same should be clearly indicated. Warranty period will be extended by the total non-operational days owing to warranty defects.

### 6. Agreement

Successful bidders will be required to enter into an agreement with the KDU on matters pertaining to supply, installation, commissioning, warranty and after sales service support for minimum of 10 years.

### 7. Training

a. 03 No's Lectures/instructors are to be trained at local agent's workshop for a duration of minimum 03 working days on conducting laboratory modules on the system.

b. Onsite training program for 02 Technical Officers during installation.

### 8. Place of Delivery

System to be delivered to the laboratory at, KDU along with the copy of order and relevant invoice. For quality control checks supplier should arrange a joint quality control check at the laboratory on completion of the installation.

### 9. Financial

- a. delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

## Specifications for Nuclear Science Laboratory experiments

### 1. Work scope

Understanding of basic radiation principle is very important for those who are working with radioactive environments. BME students are learning these basics. However, currently there is no facility to get hands on experience. six basic experiments have been identified and following equipment and radioactive isotopes are essential to carry out these experiments.

### 2. Laboratory experiments to be facilitated

The proposed Power System Protection System shall capable for conducting following laboratory module topics related to power system protection.

- a. Gamma ray detection with Scintillators
- b. Gamma ray absorption with matter
- c. Half-life measurements
- d. Half value thickness measurements
- e. Gamma Ray efficiency calibration
- f. High resolution Gamma ray spectroscopy with HPGe detectors

### 4. Laboratory equipment

1. ProSpect Gamma spectroscopy software
2. Osprey Digital tube Base MCA with connectors (2 units)
3. Broad energy Germanium system
4. NaI Detectors 2"×2" (2 units)
5. Teaching laboratory scattering table assembly: NaI Detector shielding (2 units)
6. Digital signal analyzer
7. A set of two HPGe source holder
8. Radio isotopes:  $^{137}\text{Cs}$  button source ( $1\mu\text{Ci}$ ),  $^{60}\text{Co}$  button source ( $1\mu\text{Ci}$ ),  $^{57}\text{Co}$  button source ( $1\mu\text{Ci}$ ),  $^{88}\text{Y}$  button source ( $1\mu\text{Ci}$ ),  $^{137}\text{mBa}$

5. **Warranty**

Minimum of one year from the date of commissioning should be provided. If free services are provided, same should be clearly indicated.

9. **Financial**

- a. delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

**SPECIMEN FORM OF BID SECURITY**

By this Bond we ..... (hereinafter called “the Bidder”) and We (name of bank or insurance company) whose registered office is at ..... (hereinafter called “the Surety”) are held and firmly bound onto ..... (hereinafter called the Authority”) in the sum of ..... for the payment of which sum the Bidder and the Surety bind themselves their successors and assigns jointly and severally by those presents.

Whereas the authority has invited the Tender and other persons to compete tenders in similar terms for the supply of ..... and to submit the same for the consideration of the Authority, and the Bidder proposes to submit to the Authority a Bid (hereafter called “the Bid”) in accordance with such invitation, the Bond shall provide security to the Authority that the Bidder will honour certain obligations to be undertaken by him in the Tender in accordance with the following conditions.

**Now the Conditions of this Bond are:**

- (a) That it shall remain in full force and effect until the earliest of
  - (i) (Date), being ( ) days from (submission date), the date stipulated by the Authority for the submission of tenders, or any prolongation of such date above notified to the Authority by the Bidder and the Surety in writing.
  - (ii) In the event of acceptance of the Tender by the Authority, the date upon which the Bidder provides a performance security to the Authority in accordance with the terms of the contract thereby made between them, or
- (b) Subject to this Bond being in full force and effect, the Surety shall pay the full amount specified in this Bond upon receipt of first written demand form the Authority stating that.
  - (i) The Bidder has withdrawn his Tender during the validity of this Bond, or
  - (ii) The Bidder has failed to provide a performance security to the Authority in accordance with the terms of the tender within 14 days from receipt of intimation of award of the Tender.

No alteration in the terms of the Tender, nor any forbearance of forgiveness in or in respect of neither any matter or thing concerning the Tender on the part of the Authority, nor any objection from the bidder shall in any way release the Surety from any liability under this Bond.

The benefit of this Bond shall not be assignable by the Authority and upon its ceasing to be in full force and effect the Authority shall return the same to the Bidder.

This Bond shall be governed by the laws of Sri Lanka

I executed as a deed on this ( ) day of ( ) 20 ( )

For and on behalf of the Bidder

For and on behalf of the Surety

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Signed by -----

Signed by -----

In the capacity of -----

In the capacity of -----

and by -----

and by -----

In the capacity of -----

In the capacity of -----

Seal (where applicable)

Seal (where applicable)

**DELIVERY SCHEDULE**

(IT IS MANDATORY TO FILL THE FOLLOWING SCHEDULE BY THE BIDDER)

TENDER NO :

ITEM : .....

QTY : .....

DURATION	QTY
EX STOCK QTY (WITHIN 01 WEEK)	
01MONTH	
02 MONTHS	
03 MONTHS	
04 MONTHS	
<b>TOTAL</b>	

NAME OF THE BIDDER : .....

SIGNATURE OF BIDDER : .....

DATE : .....

COMPANY SEAL : .....