



# PhilGEPS

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## Bid Notice Abstract

### Invitation to Bid (ITB)

**Reference Number** 6092106  
**Procuring Entity** CARLOS HILADO MEMORIAL STATE COLLEGE  
**Title** Procurement of Physics and Chemistry Laboratory Equipment and Supplies - Alijis Campus  
**Area of Delivery** Negros Occidental

<b>Solicitation Number:</b>	CHMSC 19-011-0313-G	<b>Status</b>	Pending
<b>Trade Agreement:</b>	Implementing Rules and Regulations	<b>Associated Components</b>	1
<b>Procurement Mode:</b>	Public Bidding	<b>Bid Supplements</b>	0
<b>Classification:</b>	Goods	<b>Document Request List</b>	0
<b>Category:</b>	Laboratory Supplies and Equipment	<b>Date Published</b>	14/03/2019
<b>Approved Budget for the Contract:</b>	PHP 649,804.45	<b>Last Updated / Time</b>	13/03/2019 15:42 PM
<b>Delivery Period:</b>	60 Day/s	<b>Closing Date / Time</b>	22/03/2019 09:30 AM
<b>Client Agency:</b>			
<b>Contact Person:</b>	Ma. Kristina Goylos Medalla Head, BAC Secretariat Mabini Street, Brgy Zone 1 Talisay City Negros Occidental Philippines 6115 63-34-7120420 Ext.142 63-34-7128404 bac.sec@chmsc.edu.ph		

#### Description

CARLOS HILADO MEMORIAL STATE COLLEGE  
 BIDS AND AWARDS COMMITTEE  
 Talisay City, Negros Occidental  
 Telefax Nos. (034) 712-8404

INVITATION TO BID FOR THE PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES - ALIJIS CAMPUS  
 CHMSC 19-011-0313-G

1. The Carlos Hilado Memorial State College, through the Corporate Budget for the Contract of 2019 approved by the governing Board, intends to apply the sum SIX HUNDRED FORTY-NINE THOUSAND EIGHT HUNDRED FOUR PESOS & 45/100 (Php 649,804.45) ONLY, being the Approved Budget for the Contract (ABC) to payments under the contract for the PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES - ALIJIS CAMPUS. Bids received in excess shall be automatically rejected at bid opening.

2. The Carlos Hilado Memorial State College now invites bids for PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES - ALIJIS CAMPUS, as follows:

LOT 1 CHEMISTRY & PHYSICS LAB. EQUIPMENT 432,634.45  
 LOT 2 CHEMISTRY LABORATORY SUPPLIES 217,170.00  
 Php 649,804.45  
 =====

Delivery of Goods is required within Sixty (60) calendar days upon receipt of Notice to Proceed. Bidders should have completed, within two (2) years from the date of submission and receipt of bids, a contract similar to the Project of at least 50% of the ABC. The description of an eligible bidder is contained in the Bidding Documents, particularly, in

## Section II. Instructions to Bidders.

3. Bidding will be conducted through open competitive bidding procedures using the non-discretionary pass/fail criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act 9184, otherwise known as the "Government Procurement Reform Act".

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Interested bidders may obtain further information from CARLOS HILADO MEMORIAL STATE COLLEGE and inspect the Bidding Documents at the address given below during 8:00 A.M. to 5:00 P.M.

The BAC Secretariat  
Brgy. Zone I, Mabini St.,  
Talisay City, Negros Occidental

5. A complete set of Bidding Documents may be acquired by interested Bidders on March 14 – 21, 2019 from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of One Thousand Pesos (Php 1,000.00) Only.

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the CARLOS HILADO MEMORIAL STATE COLLEGE, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

6. The CHMSC will not hold a pre-bid conference for this project.

7. Bids must be duly received by the BAC Secretariat at the CHMSC Conference Room, 4/F Administration Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental on or before 9:30 A.M., March 22, 2019. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 18.

Bid opening shall be on 10:00 A.M., March 22, 2019, at the same venue and address. Bids will be opened in the presence of the bidders' representatives who choose to attend at the CHMSC Conference Room, 4/F Administration Bldg., Brgy. Zone 1, Mabini St., Talisay City, Negros Occidental. Late bids shall not be accepted.

8. The Carlos Hilado Memorial State College reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.

9. For further information, please refer to:

MRS. MA. KRISTINA G. MEDALLA  
Head, BAC Secretariat  
Carlos Hilado Memorial State College  
Brgy. Zone 1, Mabini St.,  
Talisay City, Negros Occidental  
Telefax No. (034) 712-8404

ROSALINDA S. TUVILLA, LLB  
BAC Chairperson

**Line Items**

Item No.	Product/Service Name	Description	Quantity	UOM	Budget (PHP)
1	LOT 1	Chemistry and Physics Laboratory Equipment	1	Lot	432,634.45
2	LOT 2	Chemistry Laboratory Supplies	1	Lot	217,170.00

**Created by** Rowena De la Vida Prado

**Date Created** 13/03/2019

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**CARLOS HILADO MEMORIAL STATE COLLEGE  
BIDS AND AWARDS COMMITTEE**

Talisay City, Negros Occidental  
Telefax No.: (034) 712-8404

Project Reference No: **6092106/CHMSC 19-011-0313-G**  
 Name of the Project: **PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES**  
 Location of the Project: **ALIJIS CAMPUS**

page 1 of 8

***BILL OF QUANTITIES***

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
			<b>LOT 1</b>		
			<b>CHEMISTRY AND PHYSICS LABORATORY EQUIPMENT</b>		
1	1	unit	<b>TRIPLE BEAM BALANCE with Tare</b>		
			Specifications:		
			Type: Triple-Beam		
			Capacity: 610g		
			Capacity with additional mass set: 2610 g		
			Readability: 0.1 g		
			Tare: 225 g		
2	2	unit	<b>Wireless pH Sensor</b>		
			Specifications:		
			Range: 0-14 pH		
			Accuracy: +/-0.1 pH (when calibrated)		
			+/-0.5 pH (without calibration)		
			Resolution: 0.02 pH		
			Max Sample Rate: 50 samples/second		
			Battery: Coin cell		
			(Expected life of more than one year with normal use)		
			Logging: Yes		
			Connectivity: Bluetooth® Smart (Bluetooth 4.0)		
			International Protection Mark: IP67		
			Max wireless range: 30 m (unobstructed)		
3	2	unit	<b>Wireless Conductivity Sensor</b>		
			Overview:		
			Wireless measure both conductivity and dissolved solids.		
			Highly accurate with a fast response time and featuring built-in		
			temperature compensation. The Wireless Conductivity Sensor		
			measures the electrical conductivity of a water solution. Investigate		
			the properties of solutions, perform conductometric titrations,		
			model and measure water quality and more.		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



**CARLOS HILADO MEMORIAL STATE COLLEGE  
BIDS AND AWARDS COMMITTEE**

Talisay City, Negros Occidental  
Telefax No.: (034) 712-8404

Project Reference No: **6092106/CHMSC 19-011-0313-G**  
 Name of the Project: **PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES**  
 Location of the Project: **ALIJIS CAMPUS**

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***BILL OF QUANTITIES***

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
			Specifications:		
			Range:		
			0-20,000 $\mu$ S/cm		
			Not suitable for studies of marine or brackish water		
			(typically 50,000 $\mu$ S/cm or more) though such samples		
			can be diluted and measured		
			Resolution: 0.1 $\mu$ S/cm		
			Accuracy: $\pm$ 10% of value from 200 $\mu$ S/cm to 20,000 $\mu$ S/cm		
			Below 200 $\mu$ S/cm: qualitative		
			Response time: 95% of final reading in 5 seconds or less		
			Temperature accuracy: $\pm$ 0.5 C		
			Max sample rate: 10 samples per second (10 Hz)		
			Logging: Yes		
			Battery: Coin Cell, Expected battery life > 1 year		
			Connectivity: Bluetooth® Smart		
			International Protection Mark: IP67		
			(Dust proof and water resistant to a depth up to 1 m for up to 30 minutes)		
			Chemical Compatibility: The probe is composed of 300 series		
			stainless steel and glass filled polypropylene		
			Full compatibility details can be found here		
			Max wireless range: 30 m (unobstructed)		
4	1	unit	<b>Electronic Balance</b>		
			Scout SKX Balance 2000g		
			Specifications:		
			Max Capacity: 2,200 g		
			Readability : 0.1 g		
			Dimensions (HxLxW): 2.1 in x 8.8 in x 8 in		
			54 mm x 224 mm x 202 mm		
			Pan Size (LxW): 5.5 in x 6.7 in (140 mm x 170 mm)		
			Measurement Units: grams, kilograms, Newtons, pounds and ounces		
			Power: AC adapter (included) or 4 "AA" batteries (not included)		
			~120 hours use with disposable batteries		
			Display: Large backlit LCD		
			Stabilization Time: 1 s		
			Tare Range: To capacity by subtraction		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



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 Location of the Project: **ALIJIS CAMPUS**

page 3 of 8

## BILL OF QUANTITIES

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
5	2	unit	<b>Wireless Temperature Sensor</b>		
			Specifications:		
			Range: -40°C to 125°C		
			Note: This range is for the stainless steel sensor probe. The sensor housing/handle should only be subjected to temperatures of		
			-10C to 40C and long periods at the extremes of this range could impact battery life		
			Accuracy: ±0.5°C		
			Resolution: 0.01°C		
			Units: °C, K and °F		
			Logging: Yes		
			Max sample rate: 10 samples/second		
			Battery: Coin Cell, Expected battery life of > 1 year		
			Connectivity: Bluetooth® Smart (Bluetooth 4.0)		
			International Protection Mark: IP67		
			Max wireless range: 30 m (unobstructed)		
6	1	set	<b>Discover Freefall System</b>		
			Includes:		
			Drop box		
			Control Cable		
			Control Box		
			AC adapter		
			Time-of-Flight receptor pad		
			Timer Switch		
			Release washers (10)		
			Release labels for attaching washers to object (50)		
			Small nylon ball		
			Large plastic ball		
			Golf ball		
			Hollow golf ball		
			1" steel ball		
			5/8" steel ball		
7	2	set	<b>Freefalls Balls Accessory</b>		
			Includes:		
			Small Nylon Ball (2.5 cm)		
			Large Plastic Ball (10 cm)		
			Golf Ball (4.4 cm)		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



Project Reference No: **6092106/CHMSC 19-011-0313-G**  
 Name of the Project: **PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES**  
 Location of the Project: **ALIJIS CAMPUS**

*BILL OF QUANTITIES*

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
			Hollow Golf Ball (4.2 cm)		
			Steel Ball (2.5 cm)		
			Steel Ball (1.6 cm)		
			Release Washers (10)		
			Release Stickers (50)		
8	2	unit	<b>Digital Adapter</b>		
			Specifications:		
			Counting and Timing Devices: 2 $\mu$ sec. resolution		
			Motion Sensors: 1 $\mu$ sec. resolution		
			Input: two 1/4" stereo phone jacks		
9	1	set	<b>Mass and Hanger Set</b>		
			Overview:		
			Mass and Hanger Set features polycarbonate mass hangers with steel posts, and "holed" masses that will not fall off the hanger.		
			There are 27 weights in all ranging from 0.5 g to 100 g. Each mass has its value marked, and each hanger can hold approximately 250 g.		
			Special Features:		
			The smaller masses have a unique design for better visibility		
			The hanger has a steel post for strong support		
			The hanger's handle is notched making it easy to hang with thread		
			The masses stay securely on the steel post		
			Includes:		
			100 g mass (3)		
			50 g mass (3)		
			20 g mass (6)		
			10 g mass (3)		
			5 g mass (3)		
			2 g mass (3)		
			1 g mass (3)		
			0.5 g mass (3)		
			mass hanger (4)		
			Molded Storage Box		
10	2	unit	<b>Super Pulley with Clamp</b>		
			The Super Pulley, with its integral clamp, makes set-up and alignment easy. The pulley height is fully adjustable, so you can skim the top of a force table for parallax-free readings, yet keep the force parallel to the		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



Project Reference No:  
 Name of the Project:  
 Location of the Project:

**6092106/CHMSC 19-011-0313-G**  
**PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES**  
**ALIJIS CAMPUS**

## BILL OF QUANTITIES

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
			track on an inclined plane as shown in the photo. Fits tables from 0 to 2.0 cm (13/16 in.) thick.		
11	2	unit	<p><b>Tension Protractor</b></p> <p>The Tension Protractor is a spring scale and a protractor integrated into one device. Perfect for static equilibrium experiments, the rotary dial indicates the tension in the string and the angle is read where the string passes over the degree scale on the outer ring. Since the Tension Protractor is supported on a rod, it has an advantage over other spring scales which tend to weight down the string, changing the angle</p> <p>Includes:            One Tension Protractor</p> <p>Specifications:            Force Range: 0 N to 10 N <math>\pm</math>4% of reading            Force Divisions: 0.1 N            Angle Range: -90° to +90°            Angle Divisions: 1°            Diameter: 15 cm</p>		
12	1	unit	<p><b>Large Table Clamp</b></p> <p>large Table Clamp can attach to tables, shelves or other boards up to 10 cm thick. It can hold up to 12 mm diameter rods that can be mounted either horizontally or vertically. Large Threads and easy-to-turn handles allow a tight hold in almost any situation.</p>		
13	2	unit	<p><b>Stainless Steel Rod, 90 cm</b></p> <p>Overview:            These 90 cm long, non-threaded stainless steel rods are ideal for providing support to your experiments in the lab. They are non-magnetic, very rigid, and durable. Unlike aluminum rods, they do not mar. Rods have a diameter of 12.7 mm (1/2 inch).</p>		
14	2	unit	<p><b>Multi-Clamp</b></p> <p>Holds two rods either parallel or at right angles. Fits rods up to 12 mm (1/2 in.) in diameter.</p>		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



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 Name of the Project: **PROCUREMENT OF PHYSICS AND CHEMISTRY LABORATORY EQUIPMENT AND SUPPLIES**  
 Location of the Project: **ALIJIS CAMPUS**

## BILL OF QUANTITIES

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
			track on an inclined plane as shown in the photo. Fits tables from 0 to 2.0 cm (13/16 in.) thick.		
11	2	unit	<p><b>Tension Protractor</b></p> <p>The Tension Protractor is a spring scale and a protractor integrated into one device. Perfect for static equilibrium experiments, the rotary dial indicates the tension in the string and the angle is read where the string passes over the degree scale on the outer ring. Since the Tension Protractor is supported on a rod, it has an advantage over other spring scales which tend to weight down the string, changing the angle</p> <p>Includes:            One Tension Protractor</p> <p>Specifications:            Force Range: 0 N to 10 N <math>\pm 4\%</math> of reading            Force Divisions: 0.1 N            Angle Range: <math>-90^\circ</math> to <math>+90^\circ</math>            Angle Divisions: <math>1^\circ</math>            Diameter: 15 cm</p>		
12	1	unit	<p><b>Large Table Clamp</b></p> <p>large Table Clamp can attach to tables, shelves or other boards up to 10 cm thick. It can hold up to 12 mm diameter rods that can be mounted either horizontally or vertically. Large Threads and easy-to-turn handles allow a tight hold in almost any situation.</p>		
13	2	unit	<p><b>Stainless Steel Rod, 90 cm</b></p> <p>Overview:            These 90 cm long, non-threaded stainless steel rods are ideal for providing support to your experiments in the lab. They are non-magnetic, very rigid, and durable. Unlike aluminum rods, they do not mar. Rods have a diameter of 12.7 mm (1/2 inch).</p>		
14	2	unit	<p><b>Multi-Clamp</b></p> <p>Holds two rods either parallel or at right angles. Fits rods up to 12 mm (1/2 in.) in diameter.</p>		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_





Project Reference No: **6092106/CHMSC 19-011-0313-G**  
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 Location of the Project: **ALIJIS CAMPUS**

## BILL OF QUANTITIES

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
15	1	set	<b>Hooked Mass Set</b>		
			Includes:		
			1 x 500 g		
			2 x 200 g		
			1 x 100 g		
			1 x 50 g		
			2 x 20 g		
			1 x 10 g		
			Molded mass holder		
			<b>Sub-ABC = Php 432,634.45</b>		
			<b>LOT 2</b>		
			<b>Chemistry Laboratory Supplies</b>		
16	10	pcs	Test Tube (5 ml), Approximate OD X length (mm): 12 x 75		
17	10	pcs	Test Tube (10 ml), Approximate OD X length (mm): 14 x 100		
18	10	pcs	Test Tube (15 ml), Approximate OD X length (mm): 15 x 125		
19	10	pcs	Test Tube (20 ml), Approximate OD X length (mm): 16 x 150		
20	10	pcs	Test Tube (25 ml), Approximate OD X length (mm): 17 x 150		
21	10	pcs	Beaker (50 ml), Graduation Range (mL): 10 to 40; Graduation interval (mL): 10; Dimensions (H x OD), cm: 5.6 x 4.2		
22	10	pcs	Beaker (100 ml), Graduation Range (mL): 20 to 80; Graduation interval (mL): 10; Dimensions (H x OD), cm: 7.2 x 5.0		
23	10	pcs	Beaker (150 ml), Graduation Range (mL): 20 to 140; Graduation interval (mL): 10; Dimensions (H x OD), cm: 8.2 x 5.7		
24	10	pcs	Beaker (500 ml), Graduation Range (mL): 100 to 400; Graduation interval (mL): 50; Dimensions (H x OD), cm: 12.5 x 8.0		
25	10	pcs	Beaker (250 ml), Graduation Range (mL): 25 to 200; Graduation interval (mL): 25; Dimensions (H x OD), cm: 9.0 x 6.8		
26	6	pcs	Beaker (1000 ml), Graduation Range (mL): 100 to 1000; Graduation interval (mL): 50; Dimensions (H x OD), cm: 15.2 x 10.7		
27	5	pcs	Erlenmeyer Flask (125ml) Graduation Range: 50 to 125 mL; stopper # 5; Height: 11.4 cm		
28	5	pcs	Erlenmeyer Flask (250ml) Graduation Range: 50 to 200 mL; stopper # 6; Height: 13.2 cm		
29	5	pcs	Florence Flask (125ml) Graduation Range: 50 to 125 mL; stopper # 5; Height: 11.4 cm		

Signature of Bidder \_\_\_\_\_  
 Name of Firm \_\_\_\_\_  
 Date \_\_\_\_\_



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Location of the Project: **ALIJIS CAMPUS**

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***BILL OF QUANTITIES***

Date: \_\_\_\_\_

Item No.	Quantity	Unit	ARTICLES and DESCRIPTION	Unit Price	Total Price
30	10	pcs	Florence Flask (250ml) Graduation Range: 50 to 200 mL; stopper # 6; Height: 13.2 cm		
31	10	pcs	Calibrated Graduated Cylinder (10ml) Graduations (ml): 0.2; Height: 12 cm		
32	10	pcs	Calibrated Graduated Cylinder (25ml) Graduations (ml): 0.5; Height: 16 cm		
33	10	pcs	Calibrated Graduated Cylinder (50ml) Graduations (ml): 1.0; Height: 18.5 cm		
34	10	pcs	Calibrated Graduated Cylinder (100ml) Graduations (ml): 1.0; Height: 25 cm		
35	12	pcs	Watch Glass (65mm) Fits beaker size: 150 ml.		
36	12	pcs	Watch Glass (75mm) Fits beaker size: 250 ml.		
37	12	pcs	Watch Glass (100mm) Fits beaker size: 500 ml.		
38	12	pcs	Watch Glass (125mm) Fits beaker size: 1000 ml.		
39	15	pcs	Crucible with cover (porcelain) 25ml; Top outside dia (mm): 43; Height, mm: 37		
40	15	pcs	Crucible with cover (porcelain) 50ml; Top outside dia (mm): 50; Height, mm: 50		
41	15	pcs	Stirring Rod Borosilicate glass with rounded annealed ends. Length: 25 cm		
42	15	pcs	Bunsen burner (Terrill type) Liquid Propane Terrill Bunsen Burner, StabiliBase™ Anti-Tip Design with Handle		
43	15	pcs	Alcohol Lamp Height: 13 cm / 5.1 inch; Width: 8.4 cm / 3.3" Capacity: 150 ml; Empty Weight: 200g / 7.1 oz. Fuel: Denatured Alcohol Package Included: 1pc 150ml, ALCOHOL BURNER LAMP GLASS		
44	10	pcs	Thermometer Red Spirit General-Purpose Non-Mercury Glass Thermometer; Temperature Range: -20 to 150 OC Scale division: 10; Accuracy: +		



# Section VI. Schedules of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item #	Description	Quantity	Total	Delivered, Weeks/Months
	<b>LOT 1</b>			
	<b>CHEMISTRY AND PHYSICS LABORATORY EQUIPMENT</b>			
1	<b>TRIPLE BEAM BALANCE with Tare</b>	1	1	
	Specifications:			
	Type: Triple-Beam			
	Capacity: 610g			
	Capacity with additional mass set: 2610 g			
	Readability: 0.1 g			
	Tare: 225 g			
2	<b>Wireless pH Sensor</b>	2	2	
	Specifications:			
	Range: 0-14 <sup>1</sup> pH			
	Accuracy: +/-0.1 pH (when calibrated)			
	+/-0.5 pH (without calibration)			
	Resolution: 0.02 pH			
	Max Sample Rate: 50 samples/second			
	Battery: Coin cell			
	(Expected life of more than one year with normal use)			
	Logging: Yes			
	Connectivity: Bluetooth® Smart (Bluetooth 4.0)			
	International Protection Mark: IP67			
	Max wireless range: 30 m (unobstructed)			
3	<b>Wireless Conductivity Sensor</b>	2	2	
	Overview:			
	Wireless measure both conductivity and dissolved solids.			
	Highly accurate with a fast response time and featuring built-in temperature compensation. The Wireless Conductivity Sensor measures the electrical conductivity of a water solution. Investigate the properties of solutions, perform conductometric titrations, model and measure water quality and more.			
	Specifications:			
	Range:			
	0-20,000 µS/cm			
	Not suitable for studies of marine or brackish water (typically 50,000 µS/cm or more) though such samples can be diluted and measured			
	Resolution: 0.1 µS/cm			
	Accuracy: ± 10% of value from 200 µS/cm to 20,000 µS/cm			
	Below 200 µS/cm: qualitative			
	Response time: 95% of final reading in 5 seconds or less			
	Temperature accuracy: ± 0.5 C			
	Max sample rate: 10 samples per second (10 Hz)			
	Logging: Yes			
	Battery: Coin Cell, Expected battery life > 1 year			
	Connectivity: Bluetooth® Smart			
	International Protection Mark: IP67			
	(Dust proof and water resistant to a depth up to 1 m for up to 30 minutes)			
	Chemical Compatibility: The probe is composed of 300 series stainless steel and glass filled polypropylene			
	Full compatibility details can be found here			
	Max wireless range: 30 m (unobstructed)			
4	<b>Electronic Balance</b>	1	1	

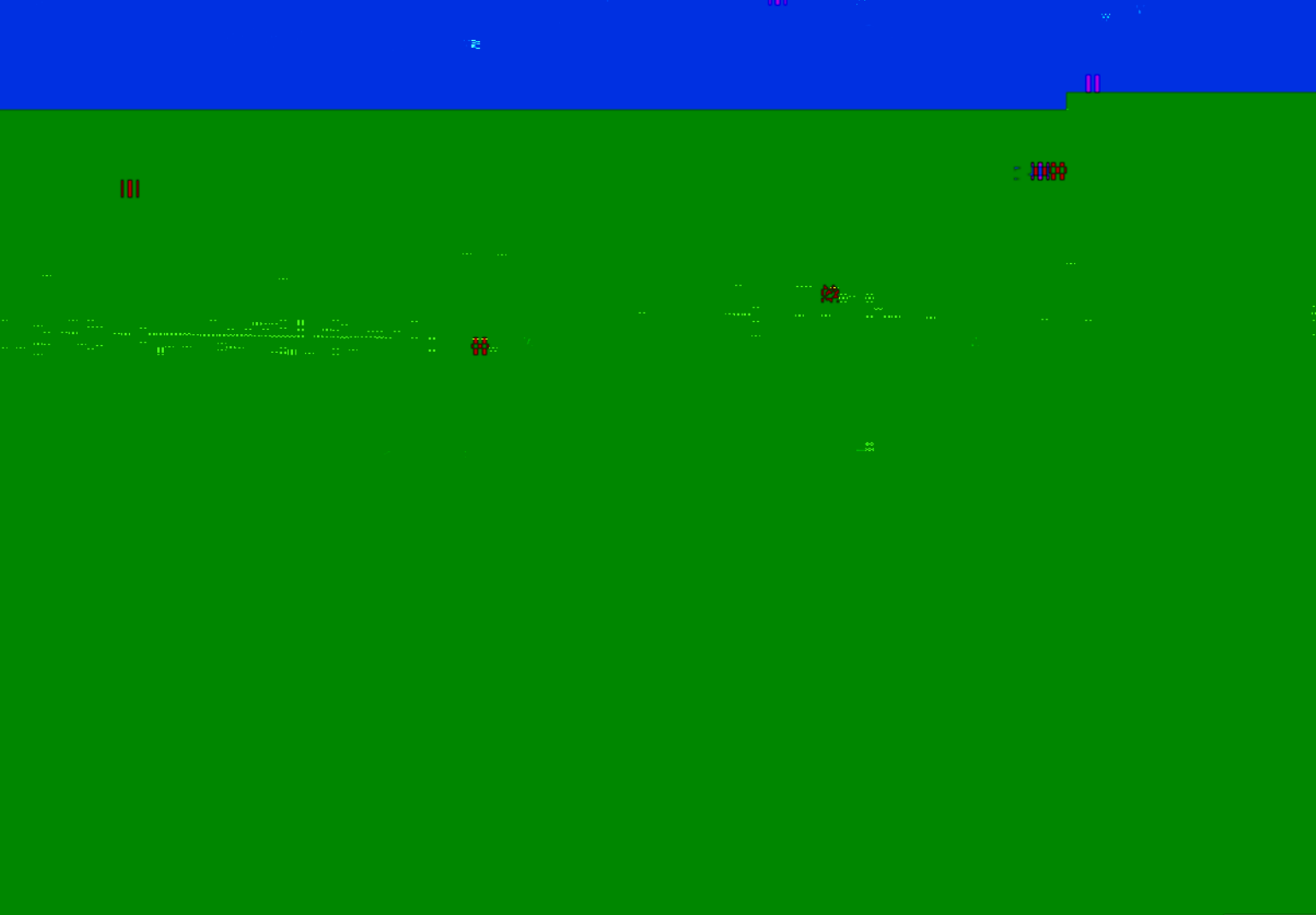
	Max Capacity: 2,200 g		
	Readability : 0.1 g		
	Dimensions (HxLxW): 2.1 in x 8.8 in x 8 in		
	54 mm x 224 mm x 202 mm		
	Pan Size (LxW): 5.5 in x 6.7 in (140 mm x 170 mm)		
	Measurement Units: grams, kilograms, Newtons, pounds and ounces		
	Power: AC adapter (included) or 4 "AA" batteries (not included)		
	~120 hours use with disposable batteries		
	Display: Large backlit LCD		
	Stabilization Time: 1 s		
	Tare Range: To capacity by subtraction		
5	<b>Wireless Temperature Sensor</b>	2	2
	Specifications:		
	Range: -40°C to 125°C		
	Note: This range is for the stainless steel sensor probe. The sensor housing/handle should only be subjected to temperatures of -10C to 40C and long periods at the extremes of this range could impact battery life		
	Accuracy: ±0.5°C		
	Resolution: 0.01°C		
	Units: °C, K and °F		
	Logging: Yes		
	Max sample rate: 10 samples/second		
	Battery: Coin Cell, Expected battery life of > 1 year		
	Connectivity: Bluetooth® Smart (Bluetooth 4.0)		
	International Protection Mark: IP67		
	Max wireless range: 30 m (unobstructed)		
6	<b>Discover Freefall System</b>	1	1
	Includes:		
	Drop box		
	Control Cable		
	Control Box		
	AC adapter		
	Time-of-Flight receptor pad		
	Timer Switch		
	Release washers (10)		
	Release labels for attaching washers to object (50)		
	Small nylon ball		
	Large plastic ball		
	Golf ball		
	Hollow golf ball		
	1" steel ball		
	5/8" steel ball		
7	<b>Freefalls Balls Accessory</b>	2	2
	Includes:		
	Small Nylon Ball (2.5 cm)		
	Large Plastic Ball (10 cm)		
	Golf Ball (4.4 cm)		
	Hollow Golf Ball (4.2 cm)		
	Steel Ball (2.5 cm)		
	Steel Ball (1.6 cm)		
	Release Washers (10)		
	Release Stickers (50)		
8	<b>Digital Adapter</b>	2	2
	Specifications:		
	Counting and Timing Devices: 2 μ sec. resolution		
	Motion Sensors: 1 μ sec. resolution		
	Input: two 1/4" stereo phone jacks		
9	<b>Mass and Hanger Set</b>	1	1

	There are 27 weights in all ranging from 0.5 g to 100 g. Each mass has its value marked, and each hanger can hold approximately 250 g. Special Features: The smaller masses have a unique design for better visibility The hanger has a steel post for strong support The hanger's handle is notched making it easy to hang with thread The masses stay securely on the steel post Includes: 100 g mass (3) 50 g mass (3) 20 g mass (6) 10 g mass (3) 5 g mass (3) 2 g mass (3) 1 g mass (3) 0.5 g mass (3) mass hanger (4) Molded Storage Box			
10	<b>Super Pulley with Clamp</b> The Super Pulley, with its integral clamp, makes set-up and alignment easy. The pulley height is fully adjustable, so you can skim the top of a force table for parallax-free readings, yet keep the force parallel to the track on an inclined plane as shown in the photo. Fits tables from 0 to 2.0 cm (13/16 in.) thick.	2	2	
11	<b>Tension Protractor</b> The Tension Protractor is a spring scale and a protractor integrated into one device. Perfect for static equilibrium experiments, the rotary dial indicates the tension in the string and the angle is read where the string passes over the degree scale on the outer ring. Since the Tension Protractor is supported on a rod, it has an advantage over other spring scales which tend to weight down the string, changing the angle Includes: One Tension Protractor Specifications: Force Range: 0 N to 10 N $\pm 4\%$ of reading Force Divisions: 0.1 N Angle Range: $-90^\circ$ to $+90^\circ$ Angle Divisions: $1^\circ$ Diameter: 15 cm	2	2	
12	<b>Large Table Clamp</b> large Table Clamp can attach to tables, shelves or other boards up to 10 cm thick. It can hold up to 12 mm diameter rods that can be mounted either horizontally or vertically. Large Threads and easy-to-turn handles allow a tight hold in almost any situation.	1	1	
13	<b>Stainless Steel Rod, 90 cm</b> Overview: These 90 cm long, non-threaded stainless steel rods are ideal for providing support to your experiments in the lab. They are non-magnetic, very rigid, and durable. Unlike aluminum rods, they do not mar. Rods have a diameter of 12.7 mm (1/2 inch).	2	2	
14	<b>Multi-Clamp</b> Holds two rods either parallel or at right angles. Fits rods up to 12 mm (1/2 in.) in diameter.	2	2	
15	<b>Hooked Mass Set</b> Includes: 1 x 1000 g 1 x 500 g 2 x 200 g	1	1	

	2 x 20 g		
	1 x 10 g		
	Molded mass holder		
	<b>Sub-ABC = Php 432,634.45</b>		
	<b>LOT 2</b>		
	<b>Chemistry Laboratory Supplies</b>		
16	Test Tube (5 ml), Approximate OD X length (mm): 12 x 75	10	10
17	Test Tube (10 ml), Approximate OD X length (mm): 14 x 100	10	10
18	Test Tube (15 ml), Approximate OD X length (mm): 15 x 125	10	10
19	Test Tube (20 ml), Approximate OD X length (mm): 16 x 150	10	10



	stopper # 6; Height: 13.2 cm	5	5
29	Florence Flask (125ml) Graduation Range: 50 to 125 ml;	5	5
	stopper # 5; Height: 14		







# Section VII. Technical Specifications

Item	Specification	Statement of Compliance
		<p>Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a.2) and/or GCC Clause 2.1(a.2).</p>
	<b>LOT 1</b>	
	<b>CHEMISTRY AND PHYSICS LABORATORY EQUIPMENT</b>	
1	<b>TRIPLE BEAM BALANCE with Tare</b>	
	Specifications:	
	Type: Triple-Beam	
	Capacity: 610g	
	Capacity with additional mass set: 2610 g	
	Readability: 0.1 g	
	Tare: 225 g	
2	<b>Wireless pH Sensor</b>	
	Specifications:	
	Range: 0-14 pH	
	Accuracy: +/-0.1 pH (when calibrated)	
	+/-0.5 pH (without calibration)	
	Resolution: 0.02 pH	
	Max Sample Rate: 50 samples/second	
	Battery: Coin cell	
	(Expected life of more than one year with normal use)	
	Logging: Yes	
	Connectivity: Bluetooth® Smart (Bluetooth 4.0)	
	International Protection Mark: IP67	
	Max wireless range: 30 m (unobstructed)	
3	<b>Wireless Conductivity Sensor</b>	
	Overview:	
	Wireless measure both conductivity and dissolved solids.	
	Highly accurate with a fast response time and featuring built-in	
	temperature compensation. The Wireless Conductivity Sensor	
	measures the electrical conductivity of a water solution. Investigate	

	model and measure water quality and more.	
	Specifications:	
	Range:	
	0-20,000 $\mu\text{S}/\text{cm}$	
	Not suitable for studies of marine or brackish water (typically 50,000 $\mu\text{S}/\text{cm}$ or more) though such samples can be diluted and measured	
	Resolution: 0.1 $\mu\text{S}/\text{cm}$	
	Accuracy: $\pm 10\%$ of value from 200 $\mu\text{S}/\text{cm}$ to 20,000 $\mu\text{S}/\text{cm}$	
	Below 200 $\mu\text{S}/\text{cm}$ : qualitative	
	Response time: 95% of final reading in 5 seconds or less	
	Temperature accuracy: $\pm 0.5$ C	
	Max sample rate: 10 samples per second (10 Hz)	
	Logging: Yes	
	Battery: Coin Cell, Expected battery life > 1 year	
	Connectivity: Bluetooth® Smart	
	International Protection Mark: IP67 (Dust proof and water resistant to a depth up to 1 m for up to 30 minutes)	
	Chemical Compatibility: The probe is composed of 300 series stainless steel and glass filled polypropylene	
	Full compatibility details can be found here	
	Max wireless range: 30 m (unobstructed)	
4	<b>Electronic Balance</b>	
	Scout SKX Balance 2000g	
	Specifications:	
	Max Capacity: 2,200 g	
	Readability : 0.1 g	
	Dimensions (HxLxW): 2.1 in x 8.8 in x 8 in 54 mm x 224 mm x 202 mm	
	Pan Size (LxW): 5.5 in x 6.7 in (140 mm x 170 mm)	
	Measurement Units: grams, kilograms, Newtons, pounds and ounces	
	Power: AC adapter (included) or 4 "AA" batteries (not included)	
	~120 hours use with disposable batteries	
	Display: Large backlit LCD	
	Stabilization Time: 1 s	
	Tare Range: To capacity by subtraction	
5	<b>Wireless Temperature Sensor</b>	
	Specifications:	
	Range: -40°C to 125°C	
	Note: This range is for the stainless steel sensor probe. The sensor housing/handle should only be subjected to temperatures of  -10C to 40C and long periods at the extremes of this range  could impact battery life	
	Accuracy: $\pm 0.5^\circ\text{C}$	
	Resolution: 0.01°C	
	Units: °C, K and °F	
	Logging: Yes	
	Max sample rate: 10 samples/second	
	Battery: Coin Cell, Expected battery life of > 1 year	
	Connectivity: Bluetooth® Smart (Bluetooth 4.0)	
	International Protection Mark: IP67	
	Max wireless range: 30 m (unobstructed)	
6	<b>Discover Freefall System</b>	
	Includes:	
	Drop box	
	Control Cable	
	Control Box	
	AC adapter	
	Time-of-Flight receptor pad	

	Release labels for attaching washers to object (50)	
	Small nylon ball	
	Large plastic ball	
	Golf ball	
	Hollow golf ball	
	1" steel ball	
	5/8" steel ball	
<b>7</b>	<b>Freefalls Balls Accessory</b>	
	Includes:	
	Small Nylon Ball (2.5 cm)	
	Large Plastic Ball (10 cm)	
	Golf Ball (4.4 cm)	
	Hollow Golf Ball (4.2 cm)	
	Steel Ball (2.5 cm)	
	Steel Ball (1.6 cm)	
	Release Washers (10)	
	Release Stickers (50)	
<b>8</b>	<b>Digital Adapter</b>	
	Specifications:	
	Counting and Timing Devices: 2 $\mu$ sec. resolution	
	Motion Sensors: 1 $\mu$ sec. resolution	
	Input: two 1/4" stereo phone jacks	
<b>9</b>	<b>Mass and Hanger Set</b>	
	Overview:	
	Mass and Hanger Set features polycarbonate mass hangers with	
	steel posts, and "holed" masses that will not fall off the hanger.	
	There are 27 weights in all ranging from 0.5 g to 100 g. Each mass	
	has its value marked, and each hanger can hold approximately 250 g.	
	Special Features:	
	The smaller masses have a unique design for better visibility	
	The hanger has a steel post for strong support	
	The hanger's handle is notched making it easy to hang with thread	
	The masses stay securely on the steel post	
	Includes:	
	100 g mass (3)	
	50 g mass (3)	
	20 g mass (6)	
	10 g mass (3)	
	5 g mass (3)	
	2 g mass (3)	
	1 g mass (3)	
	0.5 g mass (3)	
	mass hanger (4)	
	Molded Storage Box	
<b>10</b>	<b>Super Pulley with Clamp</b>	
	The Super Pulley, with its integral clamp, makes set-up and alignment	
	easy. The pulley height is fully adjustable, so you can skim the top of a	
	force table for parallax-free readings, yet keep the force parallel to the	
	track on an inclined plane as shown in the photo. Fits tables from	
	0 to 2.0 cm (13/16 in.) thick.	
<b>11</b>	<b>Tension Protractor</b>	
	The Tension Protractor is a spring scale and a protractor integrated	
	into one device. Perfect for static equilibrium experiments, the	
	rotary dial indicates the tension in the string and the angle is read	
	where the string passes over the degree scale on the outer ring.	

	advantage over other spring scales which tend to weight down the string, changing the angle	
	Includes: One Tension Protractor	
	Specifications: Force Range: 0 N to 10 N $\pm$ 4% of reading Force Divisions: 0.1 N Angle Range: -90° to +90° Angle Divisions: 1° Diameter: 15 cm	
12	<b>Large Table Clamp</b> large Table Clamp can attach to tables, shelves or other boards up to 10 cm thick. It can hold up to 12 mm diameter rods that can be mounted either horizontally or vertically. Large Threads and easy-to-turn handles allow a tight hold in almost any situation.	
13	<b>Stainless Steel Rod, 90 cm</b> Overview: These 90 cm long, non-threaded stainless steel rods are ideal for providing support to your experiments in the lab. They are non-magnetic, very rigid, and durable. Unlike aluminum rods, they do not mar. Rods have a diameter of 12.7 mm (1/2 inch).	
14	<b>Multi-Clamp</b> Holds two rods either parallel or at right angles. Fits rods up to 12 mm (1/2 in.) in diameter.	
15	<b>Hooked Mass Set</b> Includes: 1 x 1000 g 1 x 500 g 2 x 200 g 1 x 100 g 1 x 50 g 2 x 20 g 1 x 10 g Molded mass holder	
	<b>Sub-ABC = Php 432,634.45</b>	
	<b>LOT 2</b>	
	<b>Chemistry Laboratory Supplies</b>	
16	Test Tube (5 ml), Approximate OD X length (mm): 12 x 75	
17	Test Tube (10 ml), Approximate OD X length (mm): 14 x 100	
18	Test Tube (15 ml), Approximate OD X length (mm): 15 x 125	
19	Test Tube (20 ml), Approximate OD X length (mm): 16 x 150	
20	Test Tube (25 ml), Approximate OD X length (mm): 17 x 150	
21	Beaker (50 ml), Graduation Range (mL): 10 to 40; Graduation interval (mL): 10; Dimensions (H x OD), cm: 5.6 x 4.2	
22	Beaker (100 ml), Graduation Range (mL): 20 to 80; Graduation interval (mL): 10; Dimensions (H x OD), cm: 7.2 x 5.0	
23	Beaker (150 ml), Graduation Range (mL): 20 to 140; Graduation interval (mL): 10; Dimensions (H x OD), cm: 8.2 x 5.7	
24	Beaker (500 ml), Graduation Range (mL): 100 to 400; Graduation interval (mL): 50; Dimensions (H x OD), cm: 12.5 x 8.0	
25	Beaker (250 ml), Graduation Range (mL): 25 to 200; Graduation interval (mL): 25; Dimensions (H x OD), cm: 9.0 x 6.8	
26	Beaker (1000 ml), Graduation Range (mL): 100 to 1000; Graduation interval (mL): 50; Dimensions (H x OD), cm: 15.2 x 10.7	
27	Erlenmeyer Flask (125ml) Graduation Range: 50 to 125 mL; stopper # 5; Height: 11.4 cm	
28	Erlenmeyer Flask (250ml) Graduation Range: 50 to 200 mL; stopper # 6; Height: 13.2 cm	
29	Florence Flask (125ml) Graduation Range: 50 to 125 mL; stopper # 5; Height: 11.4 cm	

