

**PHILIPPINE BIDDING DOCUMENTS**

# Procurement of GOODS

Government of the Republic of the Philippines

***FOR Project 2024-4E: Supply and  
Delivery of Various Laboratory  
Equipment for the University (Second  
Advertisement)***

**Sixth Edition  
July 2020**

# Preface

These Philippine Bidding Documents (PBDs) for the procurement of Goods through Competitive Bidding have been prepared by the Government of the Philippines for use by any branch, constitutional commission or office, agency, department, bureau, office, or instrumentality of the Government of the Philippines, National Government Agencies, including Government-Owned and/or Controlled Corporations, Government Financing Institutions, State Universities and Colleges, and Local Government Unit. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract or Framework Agreement, as the case may be; (ii) the eligibility requirements of Bidders; (iii) the expected contract or Framework Agreement duration, the estimated quantity in the case of procurement of goods, delivery schedule and/or time frame; and (iv) the obligations, duties, and/or functions of the winning bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Goods to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Goods. However, they should be adapted as necessary to the circumstances of the particular Procurement Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, Bid Data Sheet, General Conditions of Contract, Special Conditions of Contract, Schedule of Requirements, and Specifications are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.

- d. The cover should be modified as required to identify the Bidding Documents as to the Procurement Project, Project Identification Number, and Procuring Entity, in addition to the date of issue.
- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

# Table of Contents

<b>Glossary of Acronyms, Terms, and Abbreviations .....</b>	<b>4</b>
<b>Section I. Invitation to Bid.....</b>	<b>7</b>
<b>Section II. Instructions to Bidders.....</b>	<b>11</b>
1. Scope of Bid.....	12
2. Funding Information .....	12
3. Bidding Requirements .....	12
4. Corrupt, Fraudulent, Collusive, and Coercive Practices.....	13
5. Eligible Bidders .....	13
6. Origin of Goods .....	14
7. Subcontracts.....	14
8. Pre-Bid Conference .....	15
9. Clarification and Amendment of Bidding Documents .....	15
10. Documents comprising the Bid: Eligibility and Technical Components.....	15
11. Documents comprising the Bid: Financial Component.....	16
12. Bid Prices .....	16
13. Bid and Payment Currencies.....	17
14. Bid Security .....	18
15. Sealing and Marking of Bids .....	18
16. Deadline for Submission of Bids .....	18
17. Opening and Preliminary Examination of Bids .....	19
18. Domestic Preference .....	19
19. Detailed Evaluation and Comparison of Bids.....	19
20. Post-Qualification .....	20
21. Signing of the Contract.....	21
<b>Section III. Bid Data Sheet .....</b>	<b>22</b>
<b>Section IV. General Conditions of Contract.....</b>	<b>55</b>
1. Scope of Contract .....	57
2. Advance Payment and Terms of Payment.....	57
3. Performance Security.....	57
4. Inspection and Tests .....	58
5. Warranty .....	58
6. Liability of the Supplier .....	58
<b>Section V. Special Conditions of Contract.....</b>	<b>59</b>
<b>Section VI. Schedule of Requirements .....</b>	<b>64</b>
<b>Section VII. Technical Specifications .....</b>	<b>92</b>
<b>Section VIII. Checklist of Technical and Financial Documents .....</b>	<b>156</b>

# *Glossary of Acronyms, Terms, and Abbreviations*

**ABC** – Approved Budget for the Contract.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**CDA** - Cooperative Development Authority.

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**CIF** – Cost Insurance and Freight.

**CIP** – Carriage and Insurance Paid.

**CPI** – Consumer Price Index.

**DDP** – Refers to the quoted price of the Goods, which means “delivered duty paid.”

**DTI** – Department of Trade and Industry.

**EXW** – Ex works.

**FCA** – “Free Carrier” shipping point.

**FOB** – “Free on Board” shipping point.

**Foreign-funded Procurement or Foreign-Assisted Project**– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**Framework Agreement** – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**GPPB** – Government Procurement Policy Board.

**INCOTERMS** – International Commercial Terms.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**Supplier** – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

**UN** – United Nations.

## ***Section I. Invitation to Bid***

### **Notes on the Invitation to Bid**

The Invitation to Bid (IB) provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The IB shall be posted in accordance with Section 21.2 of the 2016 revised IRR of RA No. 9184.

Apart from the essential items listed in the Bidding Documents, the IB should also indicate the following:

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria (*e.g.*, the application of a margin of preference in bid evaluation).

The IB should be incorporated in the Bidding Documents. The information contained in the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.





Republic of the Philippines  
**NUEVA VIZCAYA STATE UNIVERSITY**  
Bayombong, Nueva Vizcaya

**INVITATION TO BID**  
**FOR Project 2024-4E: Supply and Delivery of Various Laboratory  
Equipment for the University (Second Advertisement)**

1. The *Nueva Vizcaya State University*, through the General Fund (*Fund 101*) *FY 2024* intends to apply the sum of *Php16,650,000.00* being the ABC to payments under the contract for *2024-4E: Supply and Delivery of Various Laboratory Equipment for the University (Second Advertisement)*, as follows:

No.	Particulars	ABC	Amount of Bid Docs
Lot 1	Supply and Delivery of ICT Robotics, Technology, Agriculture, Engineering, Electronics, Communication Laboratory Equipment for the University (2 <sup>nd</sup> Advertisement)	9,590,000.00	10,000.00
Lot 2	Supply and Delivery of Scientific Equipment, Health/ Biomedical Device for the University (2 <sup>nd</sup> Advertisement)	7,060,000.00	10,000.00
	<b>TOTAL</b>	<b>16,650,000.00</b>	

Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The *NVSU* now invites bids for the above Procurement Project. Delivery of the Goods/Equipment is required by *sixty (60) calendar days*. Bidders should have completed, within *two (02) years* from the date of submission and receipt of bids, a contract similar to the Project. 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 a nondiscretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

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 No. 5183.

4. Prospective Bidders may obtain further information from *NVSU-BAC* and inspect the Bidding Documents at the address given below during *Mondays-Fridays from 8:00AM to 5:00PM*.
5. A complete set of Bidding Documents may be acquired by interested Bidders starting on *March 11, 2024* from the given address and website(s) below *and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount stated above*. The Procuring Entity shall allow the bidder to present its proof of payment for the fees *through electronic means*.

6. The NVSU will hold a Pre-Bid Conference<sup>1</sup> on *March 18, 2024 9:00AM at the Board Room, 3F New Administration Building, NVSU Bayombong Campus* through video conferencing or webcasting via Zoom, which shall be open to prospective bidders. To reduce the risks and hazards of community transmission of COVID-19, the BAC shall conduct meetings and conferences via **ZOOM (Meeting ID: 525 793 2135 Passcode: nvsu@2024)** until further notice, or until such time that the state of calamity, or implementation of community quarantine or similar government restrictions shall have been lifted by the proper government authorities.
7. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before *April 1, 2024, at 8:59 am or courier submission at the same address on or before March 27, 2024, at 5:00 pm*. Late bids shall not be accepted.
8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 14.
9. Bid opening shall be on *April 1, 2024, 9:00 am* at the given address and via **ZOOM (Meeting ID: 525 793 2135 Passcode: nvsu@2024)** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The NVSU 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 Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bid.
11. For further information, please refer to:

**ARSHIELA G. MANUEL**  
**SHERYL CAROLINE B. FONTANILLA**  
**MARY JANE C. TIME**  
**MARY JANE A. DULINAYAN**  
**DENNYLAINE IBASCO**  
**VIVIAN R. ALMENDRA**  
**NORBERT JOHN I. ESPIRITU**  
 UBAC Secretariat

3<sup>rd</sup> floor UBAC Office, New Administration Building  
 NVSU Bayombong Campus, Bayombong, Nueva Vizcaya  
 Tel. No. 078-392-1605/078-321-2112  
 Email Address: bac.equipment@nvsu.edu.ph


NVSU LANDBANK ACCOUNT No.: 0432-1028-82

---

<sup>1</sup> May be deleted in case the ABC is less than One Million Pesos (PhP1,000,000) where the Procuring Entity may not hold a Pre-Bid Conference.

12. You may visit the website:

For downloading of Bidding Documents: [www.nvsu.edu.ph](http://www.nvsu.edu.ph) March 11, 2024.



**CARLO F. VADIL**  
UBAC Chairperson, Equipment

## ***Section II. Instructions to Bidders***

### **Notes on the Instructions to Bidders**

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

## 1. Scope of Bid

The Procuring Entity, Nueva Vizcaya State University, wishes to receive Bids for the *2024-4E: Supply and Delivery of Various Laboratory Equipment for the University (Second Advertisement)*. *[insert, if applicable:]* under a Framework Agreement}, with identification number *[indicate number]*.

*[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]*

The Procurement Project referred to herein as *2024-4E: Supply and Delivery of Various Laboratory Equipment for the University (Second Advertisement)* is composed of Two (2) lots; Lot 1 consists of *forty-one (41)* items and Lot 2 consists of *twenty-one (21)* items, the details of which are described in Section VII (Technical Specifications).

## 2. Funding Information

2.1. The GOP through the source of funding as indicated below for *Fund 101, FY 2024**[indicate funding year]* in the amount of *Sixteen Million Six Hundred Fifty Thousand pesos (Php16,650,000.00)* *[indicate amount]*.

2.2. The source of funding is: General Fund (GF)

*[If an early procurement activity, select one and delete others:]*

- a. NGA, the National Expenditure Program.
- b. GOCC and GFIs, the proposed Corporate Operating Budget.
- c. LGUs, the proposed Local Expenditure Program.

*[If not an early procurement activity, select one and delete others:]*

- a. NGA, the General Appropriations Act or Special Appropriations.
- b. GOCC and GFIs, the Corporate Operating Budget.
- c. LGUs, the Annual or Supplemental Budget, as approved by the Sanggunian.

## 3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules

and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

#### **4. Corrupt, Fraudulent, Collusive, and Coercive Practices**

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

#### **5. Eligible Bidders**

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. *[Select one, delete other/s]*

- a. Foreign ownership exceeding those allowed under the rules may participate pursuant to:
  - i. When a Treaty or International or Executive Agreement as provided in Section 4 of the RA No. 9184 and its 2016 revised IRR allow foreign bidders to participate;
  - ii. Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;
  - iii. When the Goods sought to be procured are not available from local suppliers; or
  - iv. When there is a need to prevent situations that defeat competition or restrain trade.
- b. Foreign ownership limited to those allowed under the rules may participate in this Project.

5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to:

*[Select one, delete the other/s]*

- a. For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC.
- b. For the procurement of Expendable Supplies: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least twenty-five percent (25%) of the ABC.
- c. For procurement where the Procuring Entity has determined, after the conduct of market research, that imposition of either (a) or (b) will likely result to failure of bidding or monopoly that will defeat the purpose of public bidding: the Bidder should comply with the following requirements: *[Select either failure or monopoly of bidding based on market research conducted]*
  - i. Completed at least two (2) similar contracts, the aggregate amount of which should be equivalent to at least *fifty percent (50%) in the case of non-expendable supplies and services or twenty-five percent (25%) in the case of expendable supplies* of the ABC for this Project; and
  - ii. The largest of these similar contracts must be equivalent to at least half of the percentage of the ABC as required above.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

## **6. Origin of Goods**

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

## **7. Subcontracts**

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project. The Procuring Entity has prescribed that:

*[Select one, delete other/s]*

- a. Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed twenty percent (20%) of the contracted Goods.
  - b. Subcontracting is not allowed.
- 7.2. *[If Procuring Entity has determined that subcontracting is allowed during the bidding, state:]* The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
- 7.3. *[If subcontracting is allowed during the contract implementation stage, state:]* The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.
- 7.4. Subcontracting of any portion of the Project does not relieve the Supplier of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

## **8. Pre-Bid Conference**

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address *{[insert if applicable]}* and/or through videoconferencing/webcasting as indicated in paragraph 6 of the **IB**.

## **9. Clarification and Amendment of Bidding Documents**

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## **10. Documents comprising the Bid: Eligibility and Technical Components**

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within *[state relevant period as provided in paragraph 2 of the IB]* prior to the deadline for the submission and receipt of bids.



- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

## **11. Documents comprising the Bid: Financial Component**

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.
- 11.5. *[Include if Framework Agreement will be used:]* Financial proposals for single or multi-year Framework Agreement shall be submitted before the deadline of submission of bids as prescribed in the **IB**. For multi-year Framework Agreement, evaluation of the financial proposal during this stage is for purposes of determining eligibility and whether or not such financial proposal is within the ABC.

## **12. Bid Prices**

- 12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:
- a. For Goods offered from within the Procuring Entity's country:
    - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
    - ii. The cost of all customs duties and sales and other taxes already paid or payable;
    - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and

- iv. The price of other (incidental) services, if any, listed in e.
- b. For Goods offered from abroad:
  - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
  - ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)**.

12.2. *[Include if Framework Agreement will be used:]* For Framework Agreement, the following should also apply in addition to Clause 12.1:

- a. For a single year Framework Agreement, the prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation or escalation on any account. Price schedules required under Clause 12.1 shall be submitted with the bidding documents.
- b. For a multi-year Framework Agreement, the prices quoted by the Bidder during submission of eligibility documents shall be the ceiling and the price quoted during mini-competition must not exceed the initial price offer. The price quoted during call for mini-competition shall be fixed during the Bidder's performance of that Call-off and not subject to variation or escalation on any account. Price schedules required under Clause 12.1 shall be submitted with the bidding documents.

### 13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in:

*[Select one, delete the other/s]*

- a. Philippine Pesos.
- b. *[indicate currency if procurement involves a foreign-denominated bid as allowed by the Procuring Entity, which shall be tradeable or acceptable by the BSP].*

## 14. Bid Security

- 14.1. The Bidder shall submit a Bid Securing Declaration<sup>2</sup> or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 14.2. The Bid and bid security shall be valid until *[indicate date]*. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.
- 14.3. *[Include if Framework Agreement will be used:]* In the case of Framework Agreement, other than the grounds for forfeiture under the 2016 revised IRR, the bid security may also be forfeited if the successful bidder fails to sign the Framework Agreement, or fails to furnish the performance security or performance securing declaration. Without prejudice on its forfeiture, bid securities shall be returned only after the posting of performance security or performance securing declaration, as the case may be, by the winning Bidder or compliant Bidders and the signing of the Framework Agreement.

## 15. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## 16. Deadline for Submission of Bids

- 16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.
- 16.2. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, the submission of bids shall be for the initial evaluation of their technical and financial eligibility. Thereafter, those declared eligible during the said initial eligibility evaluation and entered into a Framework Agreement with the Procuring Entity shall

---

<sup>2</sup> In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.

submit anew their best financial offer at the address and on or before the date and time indicated in the Call for each minicompetition.

## **17. Opening and Preliminary Examination of Bids**

17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## **18. Domestic Preference**

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

18.2. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, determination of margin of preference shall be conducted every call for Mini-Competition.

## **19. Detailed Evaluation and Comparison of Bids**

19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed,*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

*[Include the following options if Framework Agreement will be used:]*

- a. In the case of single-year Framework Agreement, the Lowest Calculated Bid shall be determined outright after the detailed evaluation;
  - b. For multi-year Framework Agreement, the determination of the eligibility and the compliance of bidders with the technical and financial aspects of the projects shall be initially made by the BAC, in accordance with Item 7.4.2 of the Guidelines on the Use of Framework Agreement.
- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe.

In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

19.4. The Project shall be awarded as follows:

*[Select one, delete the other/s]*

Option 1 – One Project having several items that shall be awarded as one contract.

Option 2 – One Project having several items grouped into several lots, which shall be awarded as separate contracts per lot.

Option 3 - One Project having several items, which shall be awarded as separate contracts per item.

*[Delete Options 2 and 3 if Framework Agreement will be used.]*

19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

## **20. Post-Qualification**

20.1. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, all bidders initially determined to be eligible and financially compliant shall be subject to initial post-qualification. The BAC shall then recommend the execution of a Framework Agreement among all eligible, technically and financially compliant bidders and the Procuring Entity and shall be issued by HoPE a Notice to Execute Framework Agreement. The determination of the Lowest Calculated Bid (LCB) shall not be performed by the BAC until a Mini-Competition is conducted among the bidders who executed a Framework Agreement. When a Call for Mini-Competition is made, the BAC shall allow the bidders to submit their best financial proposals on such pre-scheduled date, time and place to determine the bidder with the LCB.

20.2. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, *{[Include if Framework Agreement will be used:]}* or in the case of multi-year Framework

Agreement, that it is one of the eligible bidders who have submitted bids that are found to be technically and financially compliant,)the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**. *{[Include if Framework Agreement will be used:]* For every mini-competition in Framework Agreement, the LCB shall likewise submit the required documents for final Post Qualification.}

## 21. Signing of the Contract

21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

*[Include the following clauses if Framework Agreement will be used:]*

21.2. At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity shall send the Framework Agreement Form to the Bidder, which contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.

21.3. Within ten (10) calendar days from receipt of the Notice to Execute Framework Agreement with the Procuring Entity, the successful Bidder or its duly authorized representative shall formally enter into a Framework Agreement with the procuring entity for an amount of One Peso to be paid to the procuring entity as a consideration for the option granted by the procuring entity to procure the items in the Framework Agreement List when the need arises.

21.4. The Procuring Entity shall enter into a Framework Agreement with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.

21.5. The following documents shall form part of the Framework Agreement:

- a. Framework Agreement Form;
- b. Bidding Documents;
- c. Call-offs;
- d. Winning bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted (*e.g.*, bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
- e. Performance Security or Performance Securing Declaration, as the case may be;
- f. Notice to Execute Framework Agreement; and
- g. Other contract documents that may be required by existing laws and/or specified in the **BDS**.

## ***Section III. Bid Data Sheet***

### **Notes on the Bid Data Sheet**

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

- a. Information that specifies and complements provisions of the ITB must be incorporated.
- b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

# Bid Data Sheet

<b>ITB Clause</b>									
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <p style="margin-left: 40px;">a. <i>[provide the definition or description of similar contracts].</i></p> <p style="margin-left: 40px;">b. completed within two (2) years prior to the deadline for the submission and receipt of bids.</p>								
7.1	<p><i>[Specify the portions of Goods to be subcontracted, which shall not be a significant or material component of the Project as determined by the Procuring Entity.]</i></p> <p>Not applicable</p>								
12	The price of the Goods shall be quoted in Philippine peso.								
14.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <p style="margin-left: 40px;">a. The amount of not less than <i>Three Hundred Thirty-Three Thousand Pesos only (Php333,000.00)</i> <i>[Indicate the amount equivalent to two percent (2%) of ABC]</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</p> <p style="margin-left: 40px;">b. The amount of not less than <i>Eight Hundred Thirty-Two Thousand Five Hundred pesos only (Php832,500.00)</i> <i>[Indicate the amount equivalent to five percent (5%) of ABC]</i> if bid security is in Surety Bond.</p>								
19.3	<p><i>[In case the Project will be awarded by lot, list the grouping of lots by specifying the group title, items, and the quantity for every identified lot, and the corresponding ABC for each lot.]</i></p> <p><b>Lot 1:</b> Supply and Delivery of ICT Robotics, Technology, Agriculture, Engineering, Electronics, Communication Laboratory Equipment for the University (2nd Advertisement)  <b>ABC: Php9,590,000.00</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 15%;">Item No.</th> <th style="width: 55%;">Particulars</th> <th style="width: 10%;">Qty</th> <th style="width: 20%;">Unit of Measurement</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>           TABLE, Teacher Demo Table with Sink and Overhead Mirror            Demonstration Mirror - Mirror bottom is 29 in. above tabletop.            Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a         </td> <td style="text-align: center;">1</td> <td style="text-align: center;">unit</td> </tr> </tbody> </table>	Item No.	Particulars	Qty	Unit of Measurement	1.	TABLE, Teacher Demo Table with Sink and Overhead Mirror Demonstration Mirror - Mirror bottom is 29 in. above tabletop. Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a	1	unit
Item No.	Particulars	Qty	Unit of Measurement						
1.	TABLE, Teacher Demo Table with Sink and Overhead Mirror Demonstration Mirror - Mirror bottom is 29 in. above tabletop. Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a	1	unit						



		<p>120V GFCI duplex receptacle with 20-ft. extension cord. 120V, 20A.</p> <p>Built-in Sink - Stainless steel with hand-pump faucet, 2-1/2 gallon fresh water container, and 2-1/2 gallon waste water container.</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>			
	2.	<p>AUTOCLAVE, Chamber Volume: 50 L</p> <p>Working pressure: 0.22 MPa</p> <p>Working temperature: 120-134 degree Celsius, Max. working pressure: 0.23 MPa Adjustment of temperature: 105-134 degree Celsius, Timer: 0-99 min or 0-99 hour 59min</p> <p>Dimension: 590mm x 590mm x 1280mm</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	
	3.	<p>CABINET, Combination Hazards Storage Cabinet</p> <p>Door style: manual-closed</p> <p>Height: 18 inches</p> <p>Material: Wood</p> <p>With 1000VA Automatic Voltage Regulator (AVR)</p> <p>Input range voltage: 140V-250V</p> <p>Output voltage: 110V and 220V</p> <p>For use with flammables Surface coating: Epoxy</p> <p>Dimensions (DxWxH): 18 x 47 x 18cm</p> <p>No. of doors: 2</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	
	4.	<p>CABINET, Vented Chemical Storage Cabinet</p> <p>Freestanding, 34" Wide, 115V 60Hz</p> <p>Activated carbon main filter formulated for general purpose storage to contain putrid organic odors as well as fumes</p> <p>With HEPA filter, eliminates exposure to biological particulates</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	

5.	<p>CALIBRATION EQUIPMENT, Inverted Microscope  Infinite Optical System, Extra wide field eyepiece  EW10X/22 Viewing Head: Trinocular head inclined at 30degrees, interpupillary distance 48-75mm  Objective LWD infinite plan objective 4X/0.1,WD 17.3mm ; 40X/0.6,WD 2.1mm  Infinite plan phase objective PH10X/0.25,WD 10mm,  PH20X/0.4,WD 5.1mm  Quintuple nosepiece  LWD condenser NA 0.3,LWD 72mm(without condenser 150mm) 10X-20X,40X phase annulus plate(fixed)  Illumination: Halogen lamp 6V/30W  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
6.	<p>CALIBRATION EQUIPMENT, NIR spectrometer analyzer portable spectrometer  Wavelength Range: 350-950 Stray light: less than or equal to 0.3%  Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~100,000K  Frequency range: 25-1KHz  Chromaticity coordinate accuracy: margin of error plus minus 0.0025 Application: Medical Beauty Light source  Frequency sampling rate: 1-10KHz  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
7.	<p>CALIBRATION EQUIPMENT, Analyzer  Gases detected CH4, CO2, H2S, O2 Measuring range  CH4: (0-100)%vol CO2: (0-100)%vol  H2S: (0~1000) ppm O2: (0~30.0)%vol  Resolution ratio CH4: 1%vol, CO2: 1%vol, H2S: 1ppm,</p>	1	Unit

		<p>O2: 0.1%vol</p> <p>Sensor Infrared sensor and electrochemical sensor</p> <p>Sensor lifetime greater than or equal to 5years (CH4, CO2)</p> <p>greater than or equal to 2years (H2S, O2)</p> <p>Response time CH4: less than or equal to 45S (T90)</p> <p>CO2: less than or equal to 45s (T90)</p> <p>H2S:less than or equal to45s (T90) O2: less than or equal to45s (T90)</p> <p>Alarms Audible--buzzer with greater than or equal to 80dB audible Visible-flashing red LED, greater than or equal to 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals)</p> <p>Continuous working time greater than or equal to 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours</p> <p>Dust and water resistance IP65</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
8.		<p>CALIBRATION EQUIPMENT, Water Activity Meters Measurement range: 0.1 to: 0.98 Aw (5- 45 degree Celsius) Measuring principle: Electrolytic (surface IR and NTC)</p> <p>Measurement accuracy: AW margin of error plus and minus 0.01 (margin of error plus and minus 15 degrees celsius) precision: margin of error plus and minus 0.003aw within the adjustment range (margin of error plus and minus 0.1 degree celsius ) Resolution: 0.001aw (0.1 degree celsius)</p> <p>Accuracy: margin of error plus and minus 0.010aw within calibration range (margin of error plus and minus 0.15 degree celsius)</p> <p>With product quality certification or its equivalent</p>	1	Unit

		With manufacturer's warranty		
9.	<p>INCUBATOR, Heating Incubator</p> <p>Temp. Range: 0 to 60 degree Celsius</p> <p>Temp. Accuracy: 0.5 degree celsius (at 37degree celsius)</p> <p>Temp. Uniformity: margin of error plus minus 1.0 degree celsius (at 37 degree celsius)</p> <p>Temp. Increment: 0.1 degree celsius</p> <p>Exterior: 21.25 x 21 x 39.35 in. / 54 x 53.34 x 99.85 cm</p> <p>Interior: 15.75 x 12.75 x 19.75 in. / 40 x 32.4 x 50.2 cm</p> <p>Capacity: 65L, (2.3 cu. ft.)</p> <p>Capacity of BOD bottles: 30 bottles (300ml)</p> <p>Weight: 117 lbs / 53 kg</p> <p>Electrical: 120V, 60HZ or 230V, 60Hz (385W)</p> <p>Operating Temp. Range: +10 to +30degree Celsius</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	
10.	<p>INCUBATOR, Vertical Type Shaking Incubator</p> <p>Single Door</p> <p>LCD Display; Rotary shaking, (20~350 rpm)</p> <p>Temp. range (4~60 degree celsius )</p> <p>Timing range (0~9999 h)</p> <p>Shaking plate (250 mL x 38 flask clamp)</p> <p>600 watts; AC 220 V margin of error plus minus 10%</p> <p>Internal size (WDH) (600x410x630mm)</p> <p>External size (WDH) (700x580x1280mm)</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	
11.	<p>LABORATORY EQUIPMENT, Antibiotic Disc</p> <p>Dispenser and Zone Reader</p> <p>Diameter Range: 0 to 80.0 mm</p> <p>Resolution: 0.1 mm</p> <p>Illumination: Lamp/LED 12 V/ DC</p> <p>Display: 4 digit seven segment LED display</p> <p>Power Supply: 230V +10% AC, 60Hz</p> <p>With product quality certification or its equivalent</p>	1	Unit	

		With manufacturer's warranty		
12.	LABORATORY EQUIPMENT, Archimedes Principle Apparatus Set SDFDEWER This set includes 1 Density set 1 Overflow can 1 large rod base 1 stainless Steel rod, 45 cm 1 Braided physics string 1 Ohaus Triple-beam balance (with Tare) 1 stainless caliper 1 1000 ml beaker 1 100 ml beaker 1 50 ml graduated cylinder 1 Archimedes Principle Experiment With product quality certification or its equivalent With manufacturer's warranty	1	Set	
13.	LABORATORY EQUIPMENT, Automatic Tissue Processor Processing capacity: 150-300 cassettes (depending on basket size) Reagent container capacity: 2.3 liters per container (up to 4 containers) Processing time: 30 minutes to 12 hours (adjustable) Processing steps: 10 (adjustable) Agitation speed: 100 to 400 rpm (adjustable) Vacuum: 0 to -90 kPa (adjustable) Pressure: 0 to 35 kPa (adjustable) Paraffin dispenser capacity: 1.5 liters (adjustable) Touch screen display: 7-inch color display Dimensions (W x D x H): 500 x 470 x 470 mm (19.7 x 18.5 x 18.5 in.) Weight: 42-45 kg (93-99 lbs) Power supply: 100-240V, 50/60Hz, 500VA With free training/demo With product quality certification or its equivalent With manufacturer's warranty	1	Unit	
14.	LABORATORY EQUIPMENT, Benchtop Digital pH meter with calibration solution Range: 0-14pH/± 1999mv/0-100 °C Resolution: 0.1/0.01pH/1mv/0.1 °C Accuracy: ± 0.01pH/±0.1% F.S/± 0.5 °C	1	Unit	

	Automatic three point calibration Electrode temperature probe Storage: at least 50 data groups With product quality certification or its equivalent With manufacturer's warranty		
15.	LABORATORY EQUIPMENT, Biomedical Freezer; 490L upright double door; LED display and multiple alarm function; manual defrost mode; Exterior Dimension (mm): 940w*845*D*1860H; Temperature range -20 to -40 degree Celsius; Direct cooling With product quality certification or its equivalent With manufacturer's warranty	1	Unit
16.	LABORATORY EQUIPMENT, Chlorophyll Meter Measuring area: 2mm*2mm Measuring mode: 2-wavelength concentration difference of optical methods Sensors: Silicon semiconductor photodiode Display mode: measuring value 3 digits liquid crystal display Measuring times: 2 digits liquid crystal display Min measuring interval: < 3s Measuring Range: 0.0-99.9 SPAD, - 10~99.9 degree Celsius Accuracy: margin of error $\pm 3.0$ SPAD margin of error $\pm 0.5$ degree celsius Repeat: margin of error $\pm 0.3$ SPAD margin of error $\pm 0.2$ degree celsius Operating temperature: -10-50 degree celsius Power: 4.2V -2000mah rechargeable Lithium battery Memory capacity: 30KB, automatically calculate and show the average result Weight: 200 grams With product quality certification or its equivalent With manufacturer's warranty	1	Unit
17.	LABORATORY EQUIPMENT, Conservation of Momentum Apparatus (complete set) This set includes: 2 cart mass	1	Set

		<p>2 small cart  2 Dynamics Track end stop (Pair)  2 Dynamics Track feet  1 Aluminum Dynamics Track  1 small cart rod stand adapter  With product quality certification or its equivalent  With manufacturer's warranty</p>			
	18.	<p>LABORATORY EQUIPMENT, Digital Dry Bath  Temperature range Ambient 5-150 degree celsius  Temperature display resolution 0.1 degree celsius, 4-digit LED Temperature uniformity margin of error <math>\pm 0.2</math> degree celsius at 37 degree celsius  Temperature accuracy margin of error <math>\pm 0.3</math> degree celsius  Block chamber Stainless steel Single block unit  One standard block Footprint 7.9 x 10.4 in/20 x 28.4 cm  Power: 230V, 50/60 Hz, 0.8 A  Fuse 1.5 A  Inclusion: heating block  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	
	19.	<p>LABORATORY EQUIPMENT, Digital microscope  Technical specifications:  Head: Binocular, 360 degrees rotating, 30 degrees inclined.  Eyepiece: Wide Field 10x/20mm  Nosepiece: Quadruple, reversed  Objectives; N-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25  Stage: Double layer, 150x133 mm with X-Y 75x50mm moving range  Focusing: Coaxial coarse and fine focusing  Illuminator: X-LED3 system with adjustable intensity  Condenser: Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm  Power supply: 100-240 Vac 50-60 Hz</p>	1	Unit	

		<p>External power adapter: 6Vdc output</p> <p>Camera  Camera resolution: 3.14 megapixels  Signal output: USB 2.0  Sensor size: 1/2.5"  Sensor technology: CMOS  Image format: 4/3 full-frame format  Image size: 2048x1536  No additional drivers required (Microsoft drivers installed)  Image capture: Continuous autonomous image creation, compressed video capture  Controlled parameters: Magnitude, degree of amplification, exposure time, colour enhancement  Full resolution frame rate (fps) 8@1280x1024  Other resolution frame rate (fps) 30@640x480  Sensitivity: 0.53 V/lux-second  Signal/noise ratio: (DB) 40.5  Dynamic range: (DB) 66.5  ADC conversion: 12 Bit  Color Depth: 8 Bit  Exposure time: 0-1.5 sec Binning 1x1  IR filter: Yes  IR filter range (nm): 680  Camera Power: PC USB  C-Mount: Yes</p> <p>Tablet  Operating system: Windows 10 or latest (64Bit)  CPU: Intel Atom Z8350, Quad core  CPU speed: 1.44 GHz  Graphic card: Intel HD Graphics 400 RAM at least 4 GB LPDDR3  Screen size: LED 10.1inches IPS Multi-Touch  Screen  Screen resolution: 1920x1200  Storage: HDD 64GB  Network: Wireless Bluetooth 4.0  Input: Micro USB (OTG) - USB Type-C -  Micro SD card reader</p>		
--	--	--	--	--



		<p>Output ports: Microphone - Headphone – Micro HDMI</p> <p>Battery type: Lithium-ion</p> <p>Battery capacity: 6500 mAh</p> <p>Power consumption: 15W</p> <p>Power supply: 5V, 3A</p> <p>Dimensions (mm) 261x167x9 Weight (kg) 0.53</p> <p>Language: Multi-language</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
20.		<p>LABORATORY EQUIPMENT, DIGITAL WATER VELOCITY METER</p> <p>Digital display in ft/sec or m/sec; Records 30 data sets for later analysis; Rain-proof digital computer; Highly accurate easy flow monitoring; Debris shedding turbo-prop; Lightweight, rugged, and reliable</p> <p>Telescoping handle with staff gauge; Padded carrying case for easy storage</p> <p>CE Certified</p> <p>With manufacturer's warranty</p>	1	Unit
21.		<p>LABORATORY EQUIPMENT, Handheld XRF for Soil Analysis and Environmental Remediation</p> <p>Dimensions: (W x H x D) 8.3 cm × 28.9 cm × 24.2 cm (3.25 in. × 11.4 in. × 9.5 in.)</p> <p>Weight: 1.70 kg (3.75 lb) with battery, 1.48 kg (3.24 lb) without battery</p> <p>Excitation Source: -watt X-ray tube with application-optimized anode material [rhodium (Rh), silver (Ag), or tungsten (W)]</p> <p>Detector: M series</p> <p>Large-area silicon drift detector</p> <p>Power: Removable 14.4V Lithium-ion battery with hot-swap capability</p> <p>Display: 800 × 480 (WVGA) LCD with capacitive touch screen supporting gesture control</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit

	22.	<p>LABORATORY EQUIPMENT, LABORATORY OVEN (Forced Air Drying Oven) Capacity: 54L Temp. Range: RT+10~300 degree celsius Temp. Precision: 0.1 degree celsius Temp. Uniformity: less than or equal to Max Temp. margin of error plus minus 2.5 degrees Celsius Circulation Mode: Back heating, forced convection Timing Range: 0-9999min/h Shelves NO. (pc): 2 Display: LCD Power Supply: 220V margin of error plus minus 10% 50/60Hz or 110V margin of error plus minus 10% With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	23.	<p>LABORATORY EQUIPMENT, Laboratory Freezer (-80 °C) External Size (WxDxH) mm : 880x980x1940 Internal Size (WxDxH) mm: 488x607x1140 Capacity: 338 L type: Vertical Temperature range: -40 to -86 °C Microprocessor control, LCD touch screen With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	24.	<p>LABORATORY EQUIPMENT, Laboratory Refrigerator (1 for Microorganisms &amp; 1 for Reagents) Type: Vertical Capacity: 360L Cooling Type: Forced Air Cooling Defrost Mode: Auto Refrigerant: HC, R600a With product quality certification or its equivalent With manufacturer's warranty</p>	2	Unit

	25.	<p>LABORATORY EQUIPMENT, Microcentrifuge Capacity 24 x 1.5/2 mL Max. Speed 13,300 rpm Max. RCF 17,000 x g Noise Level 56 dB(A) Temperature Range Ambient temperature Certifications/Compliance CSA, CE, IVD Type Benchtop Centrifuge Includes Hematocrit rotor Description Pico 17 Centrifuge, Refrigerated: No Run Time 1 to 99 min. (1 min. increments); HOLD Standards IEC 61010-1, IEC 61010-2- Dimensions (HWD) 8.9 x 9.6 x 13.8 in. (22.5 x 24.3 x 35.2 cm) Net Weight 23.1lb. (10.5 kg) Ventilated Electrical Requirements: Frequency 50/60 Hz Voltage 220V-240V Rotor: Hematocrit Rotor With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	26.	<p>LABORATORY EQUIPMENT, Mini UV Transilluminator Dimension (DxWXH): 247x132x48.5mm Viewing Surface (DxW) 150x80mm; wavelength:365nm; UV Tubes: T5 6W UVA; Power: 12V, 1.5A; Weight:1.4kg; Compatible Gel Type: Mini Gels Compatible gel size: 50x60, 105x60, 125x60mm Temperature: Operation 0-40C Storage:10-70C; Humidity: Operation-20-90%; Storage: -10-90%; Transportation conditions: Temperature: 10-70C; Humidity: 10-90%; Altitude conditions: Up to 2,000m With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	27.	<p>LABORATORY EQUIPMENT, Horizontal Mini Cells Electrophoresis System with Basic Power Supply Cell Specifications:</p>	1	Unit

		<p>base footprint (LxWxH) 25.5x9.2x5.6cm</p> <p>Base:  Buffer Volume: 265-320ml  Base gel Size: 7x7cm  Gel Tray size: 7x10cm</p> <p>Construction:  Base: Molded Clear Plastic Gel Casting gates:  Aluminum Safety lid: molded Clear Plastic  Electrode wire guard: molded polycarbonate  Banana Plugs:  Gold-Plated Brass, 4.4 cm length  Electrodes: Platinum, 0.25mm diameter  Electrical Cables: Dual, 20 AWG, Tinned copper wire cable Flametretardant polyurethane insulation jacket  Electrical leads: Nickle Silver  Gel Tray: UV- transparent acrylic plastic (UVTP)  Combs: Molded plastic and machine acrylic  Gel casting device: Polycarbonate 0.64cm silicon foam basebuffer volumes will vary depending on the size and thickness of the gel used.</p> <p>Basic Power Supply Specifications: Input Power  nominal: 220-240 VAC, 50-60 Hz  Actual: 90-132or 198-264 VAC, 5 mm x 20 mm, Type T input power cord: 3-wire grounded  Output Programmable  Voltage: 10V to 300V, fully adjustable in 1V steps  Voltage accuracy: 2% of reading of 3 volts, whichever is more  Ct: 4 ma to 400ma, Fully adjustable in 1 ma steps power (maximum): 75W  Terminals: 4 pair nessed banana jacks, floating in parallel Timer Controller: 001 to 999 minutes fully adjustable</p>		
--	--	---	--	--

		<p>Ripple: &lt;1% @ 300V and 70 W  Line Regulations: &lt;1% @ 300V and 70 W, 90-132 or 198-264 vac  Load regulation: &lt;1% @ 300V for 50% change in output load  Drift: &lt;1% @ after 15 mins warm up at 300v and 70w  Noise: 55 dBA at 1 Meter  readouts stability: Volts !v, current 1 mA</p> <p><b>SAFETY FEATURES:</b>  no load detection: indicated by error message on display  Sudden load change detection: indicated by error message on display  Overload/short circuit protection: Automatic power limit  Input line protection: fuse on both hot and natural Auto-power up after power failure: user selectable, setup maintained safety compliance: EN-61010</p> <p>EMI: conforms to CE standards for emissions and immunity Class A Display functions: 3 digit LED displays voltage, current or the time  Function modes: constant voltage, constant current timer pause User selectable automatic power-up after power failure  Environmental Operating Temperature humidity 0-40c  Dimensions (LxWxH): 22x21x8.5 cm weight 1.1kg, unit is stable</p> <p><b>Inclusions:</b>  1. Gel Caster  2. UV-Transparent Plastic (UVTP) Tray, &amp;x 10cm  3. 8-well comb, fixed height, 1.5mm thickness  4. 15-well comb, fixed height, 1.5mm thickness  5. Basic Power Supply</p> <p><b>Other Inclusions:</b>  1. Automated Voltage Regulator, 1kva, 1 unit, or any compatible AVR  2. Certified molecular Biology Agarose 25g  3. 50x Tris/Acetic ACid/ Edta/ TAe Nucleic acid electrophoresis Buffer</p>		
--	--	--	--	--

		<p>4. 100 bp molecular Ruler</p> <p>5. 6x Loading Dye, 1 ml</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>			
28.		<p>LABORATORY EQUIPMENT,</p> <p>Multiparameter Water Quality Meter</p> <p>Portable Type pH Range -2.000-20.000pH</p> <p>Resolution 0001,0.01,0.1pH</p> <p>Selectable Accuracy: 0.002pH</p> <p>Calibration Points: 1 to 5 points</p> <p>pHBuffer Options USA, NIST, DIN, 2 custom buffers</p> <p>ORP Range margin of error plus minus 1999.9mV Resolution 0.1, 1mV, selectable</p> <p>Accuracy margin of error plus minus 0.2mV</p> <p>Calibration Points: 1 point</p> <p>Ion Range: 0.001~19999 (depending on the range of ISE)</p> <p>Resolution: 0.001, 0.01, 0.1, 1</p> <p>Accuracy margin of error <math>\pm 0.5\%</math> F.S. (monovalent), margin of error plus minus 1% F.S. (divalent)</p> <p>Measurement Units ppm, mg/L, mol/L, mmol/L</p> <p>Calibration Points: 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000)</p> <p>Conductivity Range: 0.01~20.00, 200.0, 2000 micro S/cm, 20.00, 200.0mS/cm</p> <p>Resolution: 0001, 0.01, 0.1, 1</p> <p>Accuracy margin of error: <math>\pm 0.5\%</math> F.S.</p> <p>Calibration Points: 1 to 5 points</p> <p>Calibration Solutions: 10microS/cm, 84microS/cm, 1413microS/cm, 12.88mS/cm, 111.8mS/cm</p> <p>Temperature Coefficient Linear (0.0-10.0%/degree celsius) pure water</p> <p>Reference Temperature 20/25 degree celsius</p> <p>Cell Constant K=0.1, 1, 10 or custom</p> <p>TDS Range: 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt</p>	1	Unit	

		<p>Resolution 001,0.1,1  Accuracy margin of error plus minus 1% F.S.  TDS Factor 0.1~1.0 (default 0.5)  Salinity Range 0.00~42.00psu, 0.00~80.00ppt  Resolution 0.01  Accuracy margin of error: <math>\pm</math> 1% F.S.  Resistivity Range 0.00~20.00M? Resolution 0.01  Accuracy margin of error <math>\pm</math> 1% F.S.  DO Range 0.00~20.00mg/L, 0.0~200.0% saturation  Resolution 001mg/L,0.1%  Accuracy margin of error <math>\pm</math> 0.2mg/L, margin of error plus minus 2.0%  Calibration Points 1 or 2 points  With product quality certification or its equivalent  With manufacturer's warranty</p>			
	29.	<p>LABORATORY EQUIPMENT, PCR (Polymerase Chain Reaction) Machine/Thermal cycler  Instrument Classification: Class III  Display: Touch Screen  Sample Volume: 10-50 <math>\mu</math>l  Test measuring range: 4-100 degree celsius</p>	1	Unit	
	30.	<p>LABORATORY EQUIPMENT, All-in-One Fitness Testing Machine  System Assessments include:  Biometric Assessments: Blood Pressure, Body Weight,  Girth Measurements, Blood Chemistries, Hip-to-Waist Ratio/Body Mass Index, Lung Function Spirometry.  Body Composition Assessments: 2, 3 and 7 skinfold sites, Circumference Body Fat Calculation and Bio-Impedance Calculation.  Flexibility Protocols: Sit &amp; Reach Test, Trunk and Shoulder Rotation.  Cardiovascular Assessments: Bike Ergometer Tests,  Treadmill Tests, Adult Field Tests  Strength Protocols: Biceps Strength Test, Pushups, Sit-ups, 1- Rep Max Protocols.  Features System</p>	1	Unit	

	<p>Computer Interface Unit Integrated, Medical Grade  Cart  With appropriate/compatible computer hardware and software  With all-in-one inkjet Color Printer  Interactive Fitness Testing Equipment Skinfold Caliper  Wireless Polar Heart Rate System Isometric Strength  System Modified Sit and Reach Station Body Weight Platform  Fitness Assessment and Exercise Planning Software  (including President's Challenge and other assessment protocols)  Training Videos &amp; Tutorials Reports  Student Personal Profile (up to 20 pages)  Graphical and Data Summary Trend (compares 6 assessments) Class Lists and Database Query  Parent Mail Merge Letters, Labels and Envelopes  Available Options  Testing Equipment  Treadmill, System Interface and Software  Autobike, Interactive Testing Bike  Resting Blood Pressure and Heart Rate System  Lange  Skinfold Caliper Upgrade  Bioimpedance Scale Software  Health Risk Appraisal  (includes CDC Youth Risk Behavior Surveys)  Meal Planner  Group Reporting Template Builder System  Network Ready (network hardware, software)  With product quality certification or its equivalent  With manufacturer's warranty</p>			
31.	LABORATORY EQUIPMENT, Portable Transmittance Spectromata wavelength 380-780 nm; high precision CCD sensor	1	Unit	
32.	LABORATORY EQUIPMENT, Rotary Evaporator	1	Unit	



		50-2000mL Evaporation flask value; 1.56 L/H Evaporator Capacity; Manual Lifting; brushless Motor; Rotation speed 20- 200RPM; Led display; RT 180 degree Celsius; CE Approved		
33.	LABORATORY EQUIPMENT, UV Transilluminator	Unit dimension (cm) 34 x 29.5 x 10 Viewing Size (cm) 26 x 21 Wave length (nm) 254	1	Unit
34.	LABORATORY EQUIPMENT, Water Quality Monitoring Kit	Can test pH (range: 3 - 10.5), nitrate-nitrogen (0-15 ppm), phosphate (0.2 ppm), dissolved oxygen (0-10 ppm), total alkalinity (0-200 ppm), turbidity (0-200 JTU), and temperature (0-5 to 45 degrees centigrade).	2	Unit
35.	LABORATORY EQUIPMENT, Water Quality Testing Machine	Electronic pH tester to 14.0 pH 0.1 pH margin of error $\pm$ 0.1 pH	1	Unit
36.	MONITOR, Patient Monitor	Measured parameter: ECG, CO2, NIBP, IBP, SpO2 High-Definition Capacitive Touch Screen weight.: 4.8 kg, size: 310 x289 x169mm USB interface support Multi display mode; Built in high capacity battery up to 2 hours of continuous work; VGA output for continuous display Display screen: Capacitive screen, support multi-touch operation. 12.1-inch, 1280 x 800 pixels; display channel: Up to 10 waveform channels ECG; Led mode, 5 leads SPO2; measuring range 0-100%; Resolution: 1%; Accuracy- 70%- 100%; Pulse rate: 20-250BPM NIBP, Method: Oscillatory; Measure mode: Manual, AUto STAT; UNit: mmHGg, kPa; Auto measure time: Adjustable Measurement range: 10-270mmHg	1	Unit

		<p>ECG:</p> <p>Lead mode: 3-lead or 5-lead</p> <p>Lead selection: I, II, III, avR, avL, avF, V</p> <p>Heart rate range: Adult: 15-300bpm, Pediatric/Neonatal: 15-300bpm</p> <p>ECG waveform: 2 channels</p> <p>Accuracy: 1 bpm or 1% S-T segment detection</p> <p>Measurement range:-0.2mv~2.0mv</p> <p>Alarm: Yes, audible and visual alarm, alarm events review</p> <p>PO2: Measurement range: 0-100%</p> <p>Accuracy: 70-100%, 2% 0-69%, unspecified</p> <p>Pulse rate:</p> <p>Range: 20-254bpm; Accuracy: 3bpm</p> <p>Respiration:</p> <p>Method: RA-LL impedance</p> <p>Range: Adult:0-120rpm; pediatric/neonatal:0-150rpm;</p> <p>Apnea alarm: Yes</p> <p>Temperature: Range: 0-50</p> <p>EtCO2; Measurement Mode: Side-stream or mainstream</p> <p>Measurement range: EtCO2: 0-99mmHg;</p> <p>Accuracy: CO2 concentration</p> <p>Apnea alarm: YES</p> <p>With accessories; 2 years warranty and after sales service</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
	37.	<p>MULTIMETER, Water Quality Multi-meter</p> <p>Parameters Measured: Dissolved Oxygen (%), Dissolved Oxygen (mg/L), Temperature, Turbidity, Conductivity, Specific Conductance, Resistivity, Salinity, Water Density, pH, ORP, Ammonium, Nitrate, Chloride, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Depth, Barometer</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit

	38.	<p>PH METER, Bench Type pH meter Automatic calibration with recognition of up to 16 buffers Automatic temperature compensation Electrode check during calibration Stability icon BNC connector for glass-membrane pH electrodes or Redox electrodes STANDARD EQUIPMENT SUPPLIED: Electrode holding arm and base plate pH combination Gel-filling electrode With integrated temperature sensor (3-in-1 ) AC adapter Measuring Range: Voltage: margin of error plus minus 1500.0 mV PH: 0 to + 14.00 Temperature: -5 to + 105 degree celsius Resolution: Voltage : margin of error plus minus 0.1 mV PH: margin of error plus minus 0.01 Temperature: margin of error plus minus 0.1 degree celsius Accuracy: Voltage: margin of error plus minus 0.4 mV pH: margin of error plus minus 0.1 Temperature: margin of error plus minus 0.2 degree celsius With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	39.	<p>SEED MOISTURE METER, Grain Seed Moisture Meter Can test at least 50 types/species of grain or seed High efficiency Digital LCD, Battery input 1.5 AA (Alkaline x4); 50MHz measurement method With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	40.	<p>STIRRER, Hotplate Stirrer with Stir Bar Plate Material - Coated Aluminum/Silicon Glass Plate Dimensions, mm - 150 x 150 Heated Area, mm - 150 x 150</p>	1	Unit

	<p>Heater Power, Watt - 700 Max plate temp, degree celsius - 325</p> <p>Stirrer Speed, rpm - 100 - 2000</p> <p>Maximum Stirring Capacity, L - 15</p> <p>Compatible with SCT1 - Yes Control accuracy with SCT1 - margin of error plus minus 1 degree celsius</p> <p>Dimensions (w x d x h), mm - 172 x 248 x 120</p> <p>Net weight: 2.5 to 3.5kg</p> <p>Electrical supply – 220V-240V/50-60Hz, 750W</p> <p>IP Rating 32</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
41.	<p>WATER QUALITY METER, Portable Multi-Parameter</p> <p>Water Quality Analyzer</p> <p>Usage: 1</p> <p>Weight: 7kg</p> <p>Temperature Range: RT-500</p> <p>Power Supply: 200</p>	1	Unit

**Lot 2: Supply and Delivery of Scientific Equipment, Health/ Biomedical Device for the University**  
**(2<sup>nd</sup> Advertisement)**  
**ABC: Php7,060,000.00**

<b>Item No.</b>	<b>Particulars</b>	<b>Qty</b>	<b>Unit of Measurement</b>
1.	<p>LABORATORY EQUIPMENT,</p> <p>Glass-less infrared heating increases efficiency for faster results</p> <p>Flexible performance: Provides accurate results at either 0.1% or 10 mg readability, and is ideal for textiles, wastewater, ceramics, food and other applications that require IR heating elements and measurements to 0.1%</p> <p>Simple to operate: Set up and operation is extremely easy, just press and hold the temperature or time buttons to set drying parameters, add your sample and begin the test process. This makes the analyzer ideal for routine tasks performed by operators of all skill levels</p>	1	Unit

		<p>Compact, easy-to-clean design: The compact footprint 6.0-7.0 x 5- 6 x 11-12" (15-18 x 12-15x 25 cm-30 cm) of the analyzer is designed to take up less space and the easy-to-clean heating chamber is ideal for frequent use and inexpensive maintenance</p> <p>User-friendly touch-button design for easy operation</p> <p>Compact design suits any workspace</p> <p>Three shut off criteria (manual, timed or auto)</p> <p>One standard heating profile</p> <p>40 to 200 degree celsius heating range (4-8 degree celsius increments)</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>			
	2.	<p>LABORATORY EQUIPMENT, Arduino Artificial Intelligence Suite (Dobot Basic AI Kit) DfRduino Mega2560 V3 Specs:</p> <p>Microcontroller: ATmega2560</p> <p>Operating Voltage 5V</p> <p>Input Voltage (recommended): 7V-12V</p> <p>Input Voltage (range): 6V-20V</p> <p>Digital I/O Pins: 54 (of which 15 provide PWM output)</p> <p>Analog Input Pins: 16 I/O</p> <p>DC Current per I/O Pin: 50 mA</p> <p>DC Current for 3.3V Pin: 50 mA</p> <p>Flash Memory: 256 KB of which 4 KB used by the bootloader</p> <p>SRAM: 8 KB</p> <p>EEPROM: 4 KB Clock Speed: 16MHz</p> <p>Pixy CMUcam5 Specs:</p> <p>Processor: NXP LPC330, 204MHz, dual-core</p> <p>Image Sensor: Omni vision OV9715, 1/4", 1280x800</p> <p>Image Sensor: 75 degrees horizontal, 47 degrees vertical</p> <p>Lens Type: Standard M12 (several different types available)</p> <p>Power Consumption: 140 mA</p> <p>Power Input: USB Input (5V) or unregulated input (6V to 10V)</p> <p>RAM: 264K bytes</p> <p>Flash: 1M bytes</p>	1	Unit	

	<p>Available Data Outputs: UART serial, SPI, I2C, USB, Digital, Analog Size: 2.1" × 1.75" × 1.4" Keycap Color: Red, Green, Blue Supply Voltage: 3.3V -5V Data Type Digital Size: 22mm × 30mm</p> <p>LED Module Specs: Color: Red, Green, Blue Brightness: 2500mcd to 3300mcd Highlight Output Voltage: 3.3V - 5V Wavelength: 520nm - 530nm Angle: 80° - 110° Size 30mm × 20mm Weight: 5g</p>		
3.	<p>LABORATORY EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument Heat capacity: About 10500 J / K Oxygen bomb capacity: 300ml Oxygen charging pressure: 2.8 ~ 3.2 MPa Pressure resistance: water pressure 20MPa Weight: 2.5 kg Overall dimension: 650 * 450 * 500 mm Temperature range: 0 ~ 40 °C Response time: &lt; 4 S Resolution: 0.0001 dpi Linearity: &lt; 0.08% per 5 degree celsius temperature rise range Temperature measurement error: ± 0.003 °C for every 5 °C temperature rise range Power supply voltage: AC220V ± 10% Humidity: ≤ 80% Power: 30W Ignition voltage: AC24 V Ignition time: 5S With free training/demo With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
4.	<p>LABORATORY EQUIPMENT, Brake dynamometer Analog/Digital Max Power range: 10-20 hp</p>	1	Unit

	<p>Max RPM: 2000 rpm  Max Torque: 400 Nm  With product quality certification or its equivalent  With manufacturer's warranty</p>		
5.	<p>LABORATORY EQUIPMENT, Conventional Milling Machine  Drilling Capacity: 45mm diameter  Face milling Capacity: 80mm diameter  End milling Capacity: 32mm diameter  Max. Dist. from Spindle nose to table 450mm  Min. dist. From spindle axis to column 260mm  Spindle travel: 130 mm  Spindle speed @ 60Hz 95-1500RPM  Table size: 800x240mm  Motor power: 1.5 KW (2HP)  Std. Accessories:  1 set of collet, 4 milling vise, clamping kit, 10 pc end mill cutter  Features: Gear Driven, Head Swivels 90° vertically, micro feed precision. With DRO (Digital Read Out)  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
6.	<p>LABORATORY EQUIPMENT, Diesel engine with common rail intercooler  Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder  Displacement: 2500/2800 cu. Cm  Power: 150-170 hp at 4000 RPM  Twin overhead camshaft (DOHC) with timing belt  Vibration-damping balancing shafts  Common rail-type direct injection with electro-injectors  Turbo-supercharger with air-air intercooler  Alternator-oil filter-oil pump  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
7.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Granulation Machine  Spec: Automation  Grande: Automatic  Brand: Generic  Die and Roller Size: 6 inches  Dimension: 38 x 12 x 26 inch</p>	1	Unit

	<p>Motor Power: 7.5 HP  Output Capacity: 250 kg/hr  Pellet Size: 4-10mm;  Phase: Single  Product Type: Food Pellet Machine  Voltage: 220V-240V  With product quality certification or its equivalent  With manufacturer's warranty</p>		
8.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Machine with Electric Motor  Power: 5HP Single Phase  Working Load: 80-100 kg/hr  Default Disc Mill: 3mm  Boundary Dimension: 750 x 280 x 700mm  Voltage source: 220V-240V  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
9.	<p>LABORATORY EQUIPMENT, Fiber Optic Splicing Machine  AC adaptor: 100-220Vac input voltage, 60 Hz; 12 Vdc, 5A output voltage  With Lithium Battery: 11.1V, 5.2Ah  Applicable to SM, MM, NZ-DS, EDF, Pigtail, FTTH dropcable SC/LC/FC connector  Average Splice loss: 0.02dB(SM), 0.01dB(MM), 0.04dB(NZDS), 0.04dB(EDF)  Return Loss: <math>\geq</math> to 60dB  Splicing time: 8 seconds  Heating time: 25 seconds  Tension Test: 2.0N  Splicing Program: 50 groups  Operating Conditions: -10 degree celsius to +50 degree celsius, 0- 95% RH, 0-5000m (altitude)  LCD Monitor: 5 inches, high resolution  Fiber Image Magnification: X or Y separately views with 400 times magnification  Storage Result: 6,000 groups of latest splice results  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit
10.	<p>LABORATORY EQUIPMENT, FM Transmitter Long Range Broadcast Stereo (4 units)  Transmitter: FM  Frequency range: FM: 87-108MHz</p>	1	Unit



	<p>Step frequency: less than or equal to 100Khz  Frequency stability: margin of error <math>\pm</math> 10PPM  Frequency Stabilization Method: PLL  Harmonic Noise: less than or equal to -50dB  Output Impedance: 50 ohms  Rf output power: up to 15W (8 levels adjustable)  Pre-highlight: 75 microseconds  Distortion sound: 0.3%  Bluetooth distance: about 5 meters  Frequency response: 50Hz~15000Hz  Split: '30dB  Frequency adjustment: margin of error <math>\pm</math> 75KHZ  Snr: '60 dB  Antenna Connector Type: TNC  Working temperature: -10-45 degree celsius  Transmitter Size: 144x100x59mm  Transmitter weight: 545 grams  Antenna: Connection Type: TNC  Power: 2.15dB  Impedance: 50 ohms  Maximum stretch length: 1150 mm. (3.77 Feet)  Shortest abbreviation length: 210 mm. (0.69 Feet)  Feed Length: 5m(16.4ft)  Power Supply:  Input voltage: 100-240V 50/60Hz  Output Power: DC, 12V 3A  With product quality certification or its equivalent  With manufacturer's warranty</p>			
11.	<p>LABORATORY EQUIPMENT, Heavy duty over locker machine with table  1300-1500 max sewing speed 3/4 thread, 4 color easy threading guide 2-4 thread overlocker  LED work light  With product quality certification or its equivalent  With manufacturer's warranty</p>	2	Unit	
12.	<p>LABORATORY EQUIPMENT, Lab Mill/husker  Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr  Power: 400 W (0.5 hp) single phase Head power: 1,900 RPM  Follow Power: 1,000 RPM Size: 720 x 480 x 1400 mm</p>	1	Unit	

		<p>Weight: 49 kg  Power source: 220 V, 60 hz  With product quality certification or its equivalent  With manufacturer's warranty</p>		
13.		<p>LABORATORY EQUIPMENT, LAN Trainer Set:  wired and wireless  <b>FEATURES</b>  PC to PC communication with IEEE 802.3  Wireless LAN-IEEE 802.11 b  Token Bus - IEEE 802.4  Network design using RJ45 connectors  Error generation  Real time graphical representation of entire transmission &amp; reception  User friendly software <b>SPECIFICATIONS</b>  <b>Hardware</b>  PC to PC using RJ-45 Connector  Star topology using RJ45 Connector  Bus topology using RJ45 Connector  Data transmission speed: 10/100 Mbps  4 Nodes    <b>Software</b>  Bus, Ethernet, Wireless Topology  Protocols: Stop N Wait, Go back to N, Selective repeat  Packet size: 128, 256, 512, 1024, 2048, 4096, 8192, 16384  Inter Packet delay: 1000-5000 ms  Error generation: Acknowledgment lost, bad packet, auto error generation  Data encryption &amp; decryption  Complete analysis of Network &amp; Protocols  Graphic representation of data on s/w screen with packet details  Network details indication of computer name, IP address, Port number, status of network, MAC address and OS on computer.  Indication of packet serial number, file name, file size, file number, receiver name, Workgroup, receiver IP address, total packets, packet length, time out, protocol, topology, receiver, MAC address, port</p>	1	Unit

	<p>number, file send start time, file sent completion time, transmission time data rate(Mbps), error.</p> <p>Power Supply : 220 V margin of error plus minus 10%, 50 Hz / 60 Hz on request</p> <p>Power Consumption : 1.8 VA (approx.) Evolution of dynamic behavior.</p> <p>Experiments that can be performed</p> <p>Study &amp; implementation of cable designs in networking</p> <p>Implementation of PC to PC with IEEE 802.3</p> <p>Implementation of PC to PC with IEEE 802.11 b</p> <p>Implementation of Bus topology with IEEE 802.4</p> <p>Study of protocols</p> <p>Study of flow control</p> <p>Stop-N-wait</p> <p>Go back to N Selective repeat</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>			
14.	<p>LABORATORY EQUIPMENT, Laser Cutting and Engraving Machine</p> <p>Work surface area: at least 1290 x 990 mm</p> <p>Dimension: 1850 x 1500 x 1100 mm or equivalent</p> <p>Cutting speed: at least 30000 mm/min</p> <p>Engraving Speed: at least 60000 mm/min</p> <p>Laser Type: CO2 Laser Tube</p> <p>Laser power included: 100 watts</p> <p>Focus lens: 2.0 standard</p> <p>Resolution ratio: 0.025 mm</p> <p>Repositioning accuracy: +/-10%</p> <p>Operating humidity: 5% -80%</p> <p>Graphic format supported: BMP,GIF, JPEG, UNITX, TGA, TIFF, PLT, CDR, DWG, DXF</p> <p>Software compatibility: CorelDraw, Photoshop, AutoCAD, Tajima, CAM/CAD</p> <p>Cooling method: Water cooling(Chiller included)</p> <p>Materials compatibility: Acrylic, Wood, Fabric, Cardboard, Paper, Synthetic Granite, Natural Granite, Leather, Foam board, Glass</p> <p>Extendable size: Front and back of laser machine can be opened suitable for length material process</p> <p>Power requirements: 220V, 50HZ/60HZ Package inclusion:</p>	1	Unit	

	<p>1 unit spare lens  2 units spare mirror  1 unit rotary  1 unit air compressor  1 unit chiller  Other inclusions:  Certificate of distributorship: attached Certificate of Authority to sell issued by the Manufacturer or Philippine Distributor/Reseller.  Training Availability: Attached training certificate provided by manufacturer's certified trainer.  Training and Installation: 2 days onsite training and installation for at least 2 personnel  Warranty: 12 months warranty for parts and service After Sale Support; Attached After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.  Attached certification of parts availability issued by the manufacturer for the project.  Delivery Lead Time: Onsite delivery, installation, and commissioning and project within location  With product quality certification or its equivalent  With manufacturer's warranty</p>			
15.	<p>LABORATORY EQUIPMENT, Moisture analyzer (multi-crop)  Input voltage: 220V-240V/50-60Hz  Weighing capacity [Max]: 200g  Weighing units: % Trockenmasse g, % Feuchte  Maximum humidity: 80%  Maximum operating temperature: 40 degrees Celsius  Minimum ambient temperature: 5 degrees Celsius  Minimum humidity: 5%  Readability (moisture): 0.050%  Tare range: 200g</p>	1	unit	
16.	<p>LABORATORY EQUIPMENT, ONE SET (ONE BASE AND ONE ROVER)  MULTI- FREQUENCY GNSS RECEIVER FOR STATIC, RTK AND PPK APPLICATION  APPLICATION: With static, post Processed and real time kinematic. Display: NO DIGITAL DISPLAY  Satellite Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS</p>	1	Unit	

		<p>ACCURACY: MINIMUM</p> <p>High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm</p> <p>Vertical 3.5mm+0.4ppm Static &amp; Fast Static (RMS) Horizontal 2.5 mm + 0.5 ppm</p> <p>Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS) Horizontal 8 mm + 1 ppm</p> <p>Vertical 15 mm + 1 ppm</p> <p>Post Processed Kinematic (RMS) Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP)</p> <p>Battery operation must be 16hours with two batteries with led light indicator in battery for charge status must be NTC type approved must be a direct distributor (exclusive) software 1. can be installed in android phones, tablet or any android gadgets 2. free and downloadable at anytime controller software must have data quality control like configuring only the allowable tolerable error.</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>		
	17.	<p>LABORATORY EQUIPMENT, Petrol Engine, Electronic</p> <p>Fuel Injection (EFI) System Training Equipment 4 cylinders engine, DOHC, 1.3 CC minimum piston displacement, with OBD 2 diagnostic socket, with functional dashboard instrument panel, real and operable engine fuel injection system to illustrate the structure &amp; working process, equipment with intelligent fault setting and appraisal system, include fault setting, troubleshooting &amp; assessment functions, etc., it uses ordinary 220 ACV power which will transformed into 12 DCV as power source, has metal base frame, paint coated, with table top attached to the frame, and metal wheel with lock on base of frame for mobility. with manufacturer warranty on parts and labor, with manual of operation (english version) and include training on the use of equipment</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit
	18.	<p>LABORATORY EQUIPMENT, Sheet Metal Box Bending Machine</p> <p>Manual Box Sheet Bender Width: 1220MM (48?) Max thickness: 1.5MM Bending Angle: 0-120° Weight: 95kgs</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit

	<p>19. LABORATORY EQUIPMENT, Single Needle Lock Stitch Machine with Table  Lock stitcher  Direct electronic feed control  Minimum lubrication: Semi-Dry  For medium to heavy materials 5,000-4000 stitches per minute  With product quality certification or its equivalent  With manufacturer's warranty</p>	2	Unit	
	<p>20. SHREDDER, Filament Making System  Item: Plastic Shredder  Dimensions: At least 950 × 750 × 1320 mm  Dimensions of top hopper opening: At least 120 x 114 mm  Weight: 85 kg  Voltage: 220V-240V/50-60Hz  Total shredding blades: 14 blades (Combination of 2, 3 and 7 teeth blades are possible)  Frequency: 50 ?  Shredder Capacity: Small PET bottle, Medium PET-bottle, PP bottle caps, etc.  Certification: CE Certified Features:  Smart Control, Material specific settings  Can be converted into 2in1 (Shredder and Granulator)  Item: Filament Maker  Color: Black powder coated aluminum  Temp. Peek Point: 450°C  Heating Zones: 4? Independent Controllable  Swappable Extruder Design: Yes  Mixing screw: High-flow screw  Extrusion Data Analysis: Real-time  Extrusion Direction: Vertical  Compatible Materials: PLA, ABS, UNIT, PS, PETG, TPU, TPE, PPS, PVA, Bio PE, NEW PET, PA (6,12, PACKAGE INCLUSION: 66), PEEK, UNIT, PS, PEKK,  PAEK, PEI, PSU, PES, PTFE, PVD+, and many more  1x Spool  1x Pouch PLA - 1200g  1x Pouch cleaning 350g  1x Spool Holder</p>	1	Set	

	<p>Other Inclusions:</p> <p>Certificate of Distributorship: Certificate of authority to sell issued by the manufacturer or its Philippine Distributor/Reseller.</p> <p>Training and Installation: 3 days onsite training and installation for at least 5 personnel. Attached training certificate</p> <p>Warranty: 12 months warranty for parts and service.</p> <p>After Sale Support: After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Parts availability certificate issued by the manufacturer for the project.</p> <p>Delivery: Onsite delivery, installation, and commissioning at Project Location</p> <p>Delivery Lead Time: 90 Days</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>			
21.	<p>TANK, Argon tank with argon gas</p> <p>Cylinder Type Name: T 330</p> <p>Tank Gas Capacity in Cubic Feet: 335</p> <p>Diameter: 9.2 inches</p> <p>Height: 55 inches</p> <p>Weight: 170 pounds</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	325,000.00
<p><i>[In case the project will be awarded by item, list each item indicating its quantity and ABC.]</i></p>				
20.2	<p><i>[List here any licenses and permits relevant to the Project and the corresponding law requiring it.]</i></p>			
21.2	<p><i>[List here any additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity.]</i></p>			

## ***Section IV. General Conditions of Contract***

### **Notes on the General Conditions of Contract**

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Supplier, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.





## 1. **Scope of Contract**

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

## 2. **Advance Payment and Terms of Payment**

2.1. Advance payment of the contract amount is provided under Annex “D” of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

*[Include the following clauses if Framework Agreement will be used:]*

2.3. For a single-year Framework Agreement, prices charged by the Supplier for Goods delivered and/or services performed under a Call-Off shall not vary from the prices quoted by the Supplier in its bid.

2.4. For multi-year Framework Agreement, prices charged by the Supplier for Goods delivered and/or services performed under a Call-Off shall not vary from the prices quoted by the Supplier during conduct of Mini-Competition.

## 3. **Performance Security**

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184. *[[Include if Framework Agreement will be used:] In the case of Framework Agreement, the Bidder may opt to furnish the*

performance security or a Performance Securing Declaration as defined under the Guidelines on the Use of Framework Agreement.}

#### **4. Inspection and Tests**

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project *{[Include if Framework Agreement will be used:]* or Framework Agreement} specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

#### **5. Warranty**

5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

5.2 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

#### **6. Liability of the Supplier**

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## *Section V. Special Conditions of Contract*

### **Notes on the Special Conditions of Contract**

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Goods purchased. In preparing this Section, the following aspects should be checked:

- a. Information that complements provisions of the GCC must be incorporated.
- b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

## Special Conditions of Contract

GCC Clause	
1	<p><i>[List here any additional requirements for the completion of this Contract. The following requirements and the corresponding provisions may be deleted, amended, or retained depending on its applicability to this Contract:]</i></p> <p><b>Delivery and Documents –</b></p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p><i>[For Goods supplied from abroad, state:]</i> “The delivery terms applicable to the Contract are DDP delivered <i>[indicate place of destination]</i>. In accordance with INCOTERMS.”</p> <p><i>[For Goods supplied from within the Philippines, state:]</i> “The delivery terms applicable to this Contract are delivered <i>[indicate place of destination]</i>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <p>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is <i>Ms. Divina DC. Pinaroc</i>.</p> <p><b>Incidental Services –</b></p> <p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements: <i>Select appropriate requirements and delete the rest.</i></p> <ol style="list-style-type: none"> <li>a. performance or supervision of on-site assembly and/or start-up of the supplied Goods;</li> <li>b. furnishing of tools required for assembly and/or maintenance of the supplied Goods;</li> <li>c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;</li> <li>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</li> </ol>

- e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- f. *[Specify additional incidental service requirements, as needed.]*

The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

**Spare Parts –**

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

*Select appropriate requirements and delete the rest.*

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

The spare parts and other components required are listed in **Section VI (Schedule of Requirements)** and the cost thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of *[indicate here the time period specified. If not used indicate a time period of three times the warranty period]*.

Spare parts or components shall be supplied as promptly as possible, but in any case, within *[insert appropriate time period]* months of placing the order.

	<p><b>Packaging –</b></p> <p>The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.</p> <p>The packaging, 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 below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity  Name of the Supplier  Contract Description  Final Destination  Gross weight  Any special lifting instructions  Any special handling instructions  Any relevant HAZCHEM classifications</p>
	<p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p> <p><b>Transportation –</b></p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p> <p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p>

	<p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p> <p><b>Intellectual Property Rights –</b></p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
2.2	<p><i>[If partial payment is allowed, state]</i> “The terms of payment shall be as follows: _____.”</p> <p>Not applicable</p>
4	<p>The inspections and tests that will be conducted are: Quality and functional ICT Equipment. <i>Complete and conforms to the technical specifications.</i></p>



## *Section VI. Schedule of Requirements*

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

**Lot 1: Supply and Delivery of ICT Robotics, Technology, Agriculture, Engineering, Electronics, Communication Laboratory Equipment for the University (2<sup>nd</sup> Advertisement)**

**ABC: Php9,590,000.00**

Item No	Unit	Particulars	Qty	Delivered weeks/Months
1.	unit	<p>TABLE, Teacher Demo Table with Sink and Overhead Mirror</p> <p>Demonstration Mirror - Mirror bottom is 29 in. above tabletop.</p> <p>Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a 120V GFCI duplex receptacle with 20-ft. extension cord. 120V, 20A.</p> <p>Built-in Sink - Stainless steel with hand-pump faucet, 2-1/2 gallon fresh water container, and 2-1/2 gallon waste water container.</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	60 Calendar Days
2.	Unit	<p>AUTOCLAVE, Chamber Volume: 50 L Working pressure: 0.22 MPa</p> <p>Working temperature: 120-134 degree Celsius, Max. working pressure: 0.23 MPa Adjustment of temperature: 105-134 degree Celsius, Timer: 0-99 min or 0-99 hour 59min</p> <p>Dimension: 590mm x 590mm x 1280mm</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	
3.	Unit	<p>CABINET, Combination Hazards Storage Cabinet</p> <p>Door style: manual-closed</p> <p>Height: 18 inches</p> <p>Material: Wood</p> <p>With 1000VA Automatic Voltage Regulator (AVR)</p> <p>Input range voltage: 140V-250V</p> <p>Output voltage: 110V and 220V</p> <p>For use with flammables Surface coating: Epoxy</p> <p>Dimensions (DxWxH): 18 x 47 x 18cm</p> <p>No. of doors: 2</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	
4.	Unit	<p>CABINET, Vented Chemical Storage Cabinet</p> <p>Freestanding, 34" Wide, 115V 60Hz</p>	1	

		<p>Activated carbon main filter formulated for general purpose storage to contain putrid organic odors as well as fumes</p> <p>With HEPA filter, eliminates exposure to biological particulates</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
5.	Unit	<p>CALIBRATION EQUIPMENT, Inverted Microscope</p> <p>Infinite Optical System, Extra wide field eyepiece</p> <p>EW10X/22 Viewing Head: Trinocular head inclined at 30degrees, interpupillary distance 48-75mm</p> <p>Objective LWD infinite plan objective 4X/0.1,WD 17.3mm ; 40X/0.6,WD 2.1mm</p> <p>Infinite plan phase objective PH10X/0.25,WD 10mm, PH20X/0.4,WD 5.1mm</p> <p>Quintuple nosepiece</p> <p>LWD condenser NA 0.3,LWD 72mm(without condenser 150mm) 10X-20X,40X phase annulus plate(fixed)</p> <p>Illumination: Halogen lamp 6V/30W</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
6.	Unit	<p>CALIBRATION EQUIPMENT, NIR spectrometer analyzer portable spectrometer</p> <p>Wavelength Range: 350-950 Stray light: less than or equal to 0.3%</p> <p>Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~100,000K</p> <p>Frequency range: 25-1KHz</p> <p>Chromaticity coordinate accuracy: margin of error plus minus 0.0025 Application: Medical Beauty Light source</p> <p>Frequency sampling rate: 1-10KHz</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
7.	Unit	<p>CALIBRATION EQUIPMENT, Analyzer</p> <p>Gases detected CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>S, O<sub>2</sub> Measuring range</p> <p>CH<sub>4</sub>: (0-100)% vol CO<sub>2</sub>: (0-100)% vol</p> <p>H<sub>2</sub>S: (0~1000) ppm O<sub>2</sub>: (0~30.0)% vol</p> <p>Resolution ratio CH<sub>4</sub>: 1% vol, CO<sub>2</sub>: 1% vol, H<sub>2</sub>S: 1ppm, O<sub>2</sub>: 0.1% vol</p> <p>Sensor Infrared sensor and electrochemical sensor</p> <p>Sensor lifetime greater than or equal to 5years (CH<sub>4</sub>, CO<sub>2</sub>)</p> <p>greater than or equal to 2years (H<sub>2</sub>S, O<sub>2</sub>)</p>	1	

		<p>Response time CH4: less than or equal to 45S (T90)  CO2: less than or equal to 45s (T90)  H2S:less than or equal to45s (T90) O2: less than or equal to45s (T90)</p> <p>Alarms Audible--buzzer with greater than or equal to 80dB audible Visible-flashing red LED, greater than or equal to 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals)</p> <p>Continuous working time greater than or equal to 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours</p> <p>Dust and water resistance IP65  With product quality certification or its equivalent  With manufacturer's warranty</p>		
8.	Unit	<p>CALIBRATION EQUIPMENT, Water Activity Meters Measurement range: 0.1 to: 0.98 Aw (5- 45 degree Celsius) Measuring principle: Electrolytic (surface IR and NTC) Measurement accuracy: AW margin of error plus and minus 0.01 (margin of error plus and minus 15 degrees celsius) precision: margin of error plus and minus 0.003aw within the adjustment range (margin of error plus and minus 0.1 degree celsius ) Resolution: 0.001aw (0.1 degree celsius) Accuracy: margin of error plus and minus 0.010aw within calibration range (margin of error plus and minus 0.15 degree celsius)</p> <p>With product quality certification or its equivalent  With manufacturer's warranty</p>	1	
9.	Unit	<p>INCUBATOR, Heating Incubator  Temp. Range: 0 to 60 degree Celsius  Temp. Accuracy: 0.5 degree celsius (at 37degree celsius)  Temp. Uniformity: margin of error plus minus 1.0 degree celsius (at 37 degree celsius)  Temp. Increment: 0.1 degree celsius  Exterior: 21.25 x 21 x 39.35 in. / 54 x 53.34 x 99.85 cm  Interior: 15.75 x 12.75 x 19.75 in. / 40 x 32.4 x 50.2 cm  Capacity: 65L, (2.3 cu. ft.)  Capacity of BOD bottles: 30 bottles (300ml)  Weight: 117 lbs / 53 kg  Electrical: 120V, 60HZ or 230V, 60Hz (385W)  Operating Temp. Range: +10 to +30degree Celsius</p>	1	

		With product quality certification or its equivalent With manufacturer's warranty		
10.	Unit	INCUBATOR, Vertical Type Shaking Incubator Single Door LCD Display; Rotary shaking, (20~350 rpm) Temp. range (4~60 degree celsius ) Timing range (0~9999 h) Shaking plate (250 mL x 38 flask clamp) 600 watts; AC 220 V margin of error plus minus 10% Internal size (WDH) (600x410x630mm) External size (WDH) (700x580x1280mm) With product quality certification or its equivalent With manufacturer's warranty	1	
11.	Unit	LABORATORY EQUIPMENT, Antibiotic Disc Dispenser and Zone Reader Diameter Range: 0 to 80.0 mm Resolution: 0.1 mm Illumination: Lamp/LED 12 V/ DC Display: 4 digit seven segment LED display Power Supply: 230V +10% AC, 60Hz With product quality certification or its equivalent With manufacturer's warranty	1	
12.	Set	LABORATORY EQUIPMENT, Archimedes Principle Apparatus Set SDFDEWER This set includes 1 Density set 1 Overflow can 1 large rod base 1 stainless Steel rod, 45 cm 1 Braided physics string 1 Ohaus Triple-beam balance (with Tare) 1 stainless caliper 1 1000 ml beaker 1 100 ml beaker 1 50 ml graduated cylinder 1 Archimedes Principle Experiment With product quality certification or its equivalent With manufacturer's warranty	1	
13.	Unit	LABORATORY EQUIPMENT, Automatic Tissue Processor Processing capacity: 150-300 cassettes (depending on basket size) Reagent container capacity: 2.3 liters per container (up to 4 containers) Processing time: 30 minutes to 12 hours (adjustable) Processing steps: 10 (adjustable) Agitation speed: 100 to 400 rpm (adjustable) Vacuum: 0 to -90 kPa (adjustable) Pressure: 0 to 35 kPa (adjustable)	1	

		<p>Paraffin dispenser capacity: 1.5 liters (adjustable)</p> <p>Touch screen display: 7-inch color display</p> <p>Dimensions (W x D x H): 500 x 470 x 470 mm (19.7 x 18.5 x 18.5 in.)</p> <p>Weight: 42-45 kg (93-99 lbs)</p> <p>Power supply: 100-240V, 50/60Hz, 500VA</p> <p>With free training/demo</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
14.	Unit	<p>LABORATORY EQUIPMENT, Benchtop Digital pH meter with calibration solution</p> <p>Range: 0-14pH/± 1999mv/0-100 °C</p> <p>Resolution: 0.1/0.01pH/1mv/0.1 °C</p> <p>Accuracy: ± 0.01pH/±0.1% F.S/± 0.5 °C</p> <p>Automatic three point calibration</p> <p>Electrode temperature probe</p> <p>Storage: at least 50 data groups</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
15.	Unit	<p>LABORATORY EQUIPMENT, Biomedical Freezer; 490L upright double door; LED display and multiple alarm function; manual defrost mode; Exterior Dimension (mm): 940w*845*D*1860H; Temperature range -20 to -40 degree Celsius; Direct cooling</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
16.	Unit	<p>LABORATORY EQUIPMENT, Chlorophyll Meter</p> <p>Measuring area: 2mm*2mm</p> <p>Measuring mode:2-wavelength concentration difference of optical methods</p> <p>Sensors: Silicon semiconductor photodiode</p> <p>Display mode: measuring value 3 digits liquid crystal display</p> <p>Measuring times: 2 digits liquid crystal display</p> <p>Min measuring interval:&lt; 3s</p> <p>Measuring Range:0.0-99.9 SPAD, - 10~99.9 degree Celsius</p> <p>Accuracy: margin of error ± 3.0 SPAD</p> <p>margin of error ± 0.5 degree celsius</p> <p>Repeat: margin of error ± 0.3 SPAD</p> <p>margin of error ± 0.2 degree celsius</p> <p>Operating temperature: -10-50 degree celsius</p> <p>Power: 4.2V -2000mah rechargeable Lithium battery</p> <p>Memory capacity: 30KB, automatically calculate and show the average result</p> <p>Weight: 200 grams</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
17.	Set	<p>LABORATORY EQUIPMENT, Conservation of Momentum Apparatus (complete set)</p>	1	

		<p>This set includes:</p> <ul style="list-style-type: none"> <li>2 cart mass</li> <li>2 small cart</li> <li>2 Dynamics Track end stop (Pair)</li> <li>2 Dynamics Track feet</li> <li>1 Aluminum Dynamics Track</li> <li>1 small cart rod stand adapter</li> <li>With product quality certification or its equivalent</li> <li>With manufacturer's warranty</li> </ul>		
<b>18.</b>	Unit	<p>LABORATORY EQUIPMENT, Digital Dry Bath</p> <p>Temperature range Ambient 5-150 degree celsius</p> <p>Temperature display resolution 0.1 degree celsius, 4-digit LED Temperature uniformity margin of error <math>\pm</math> 0.2 degree celsius at 37 degree celsius</p> <p>Temperature accuracy margin of error <math>\pm</math> 0.3 degree celsius</p> <p>Block chamber Stainless steel Single block unit One standard block Footprint 7.9 x 10.4 in/20 x 28.4 cm</p> <p>Power: 230V, 50/60 Hz, 0.8 A</p> <p>Fuse 1.5 A</p> <p>Inclusion: heating block</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
<b>19.</b>	Unit	<p>LABORATORY EQUIPMENT, Digital microscope</p> <p>Technical specifications:</p> <p>Head: Binocular, 360 degrees rotating, 30 degrees inclined.</p> <p>Eyepiece: Wide Field 10x/20mm</p> <p>Nosepiece: Quadruple, reversed</p> <p>Objectives; N-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25</p> <p>Stage: Double layer, 150x133 mm with X-Y 75x50mm moving range</p> <p>Focusing: Coaxial coarse and fine focusing</p> <p>Illuminator: X-LED3 system with adjustable intensity</p> <p>Condenser: Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm</p> <p>Power supply: 100-240 Vac 50-60 Hz</p> <p>External power adapter: 6Vdc output</p> <p>Camera</p> <p>Camera resolution: 3.14 megapixels</p> <p>Signal output: USB 2.0</p> <p>Sensor size: 1/2.5"</p> <p>Sensor technology: CMOS</p> <p>Image format: 4/3 full-frame format</p> <p>Image size: 2048x1536</p>	1	

		<p>No additional drivers required (Microsoft drivers installed)</p> <p>Image capture: Continuous autonomous image creation, compressed video capture</p> <p>Controlled parameters: Magnitude, degree of amplification, exposure time, colour enhancement</p> <p>Full resolution frame rate (fps) 8@1280x1024</p> <p>Other resolution frame rate (fps) 30@640x480</p> <p>Sensitivity: 0.53 V/lux-second</p> <p>Signal/noise ratio: (DB) 40.5</p> <p>Dynamic range: (DB) 66.5</p> <p>ADC conversion: 12 Bit</p> <p>Color Depth: 8 Bit</p> <p>Exposure time: 0-1.5 sec Binning 1x1</p> <p>IR filter: Yes</p> <p>IR filter range (nm): 680</p> <p>Camera Power: PC USB</p> <p>C-Mount: Yes</p> <p>Tablet</p> <p>Operating system: Windows 10 or latest (64Bit)</p> <p>CPU: Intel Atom Z8350, Quad core</p> <p>CPU speed: 1.44 GHz</p> <p>Graphic card: Intel HD Graphics 400 RAM at least 4 GB LPDDR3</p> <p>Screen size: LED 10.1inches IPS Multi-Touch Screen</p> <p>Screen resolution: 1920x1200</p> <p>Storage: HDD 64GB</p> <p>Network: Wireless Bluetooth 4.0</p> <p>Input: Micro USB (OTG) - USB Type-C - Micro SD card reader</p> <p>Output ports: Microphone - Headphone – Micro HDMI</p> <p>Battery type: Lithium-ion</p> <p>Battery capacity: 6500 mAh</p> <p>Power consumption: 15W</p> <p>Power supply: 5V, 3A</p> <p>Dimensions (mm) 261x167x9 Weight (kg) 0.53</p> <p>Language: Multi-language</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
<b>20.</b>	Unit	<p>LABORATORY EQUIPMENT, DIGITAL WATER VELOCITY METER</p> <p>Digital display in ft/sec or m/sec; Records 30 data sets for later analysis; Rain-proof digital computer; Highly</p>	1	

		<p>accurate easy flow monitoring; Debris shedding turbo-prop; Lightweight, rugged, and reliable</p> <p>Telescoping handle with staff gauge; Padded carrying case for easy storage</p> <p>CE Certified</p> <p>With manufacturer's warranty</p>		
21.	Unit	<p>LABORATORY EQUIPMENT, Handheld XRF for Soil</p> <p>Analysis and Environmental Remediation</p> <p>Dimensions: (W x H x D) 8.3 cm × 28.9 cm × 24.2 cm (3.25 in. × 11.4 in. × 9.5 in.)</p> <p>Weight: 1.70 kg (3.75 lb) with battery, 1.48 kg (3.24 lb) without battery</p> <p>Excitation Source: -watt X-ray tube with application-optimized anode material [rhodium (Rh), silver (Ag), or tungsten (W)]</p> <p>Detector: M series</p> <p>Large-area silicon drift detector</p> <p>Power: Removable 14.4V Lithium-ion battery with hot-swap capability</p> <p>Display: 800 × 480 (WVGA) LCD with capacitive touch screen supporting gesture control</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
22.	Unit	<p>LABORATORY EQUIPMENT, LABORATORY OVEN</p> <p>(Forced Air Drying Oven)</p> <p>Capacity: 54L</p> <p>Temp. Range: RT+10~300 degree celsius Temp.</p> <p>Precision: 0.1 degree celsius</p> <p>Temp. Uniformity: less than or equal to Max Temp. margin of error plus minus 2.5 degrees Celsius</p> <p>Circulation Mode: Back heating, forced convection</p> <p>Timing Range: 0-9999min/h</p> <p>Shelves NO. (pc): 2 Display: LCD</p> <p>Power Supply: 220V margin of error plus minus 10% 50/60Hz or 110V margin of error plus minus 10%</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
23.	Unit	<p>LABORATORY EQUIPMENT, Laboratory Freezer (-80 °C)</p> <p>External Size (WxDxH) mm : 880x980x1940</p> <p>Internal Size (WxDxH) mm: 488x607x1140</p> <p>Capacity: 338 L</p> <p>type: Vertical</p>	1	



		Temperature range: -40 to -86 °C Microprocessor control, LCD touch screen With product quality certification or its equivalent With manufacturer's warranty		
24.	Unit	LABORATORY EQUIPMENT, Laboratory Refrigerator (1 for Microorganisms & 1 for Reagents) Type: Vertical Capacity: 360L Cooling Type: Forced Air Cooling Defrost Mode: Auto Refrigerant: HC, R600a With product quality certification or its equivalent With manufacturer's warranty	2	
25.	Unit	LABORATORY EQUIPMENT, Microcentrifuge Capacity 24 x 1.5/2 mL Max. Speed 13,300 rpm Max. RCF 17,000 x g Noise Level 56 dB(A) Temperature Range Ambient temperature Certifications/Compliance CSA, CE, IVD Type Benchtop Centrifuge Includes Hematocrit rotor Description Pico 17 Centrifuge, Refrigerated: No Run Time 1 to 99 min. (1 min. increments); HOLD Standards IEC 61010-1, IEC 61010-2- Dimensions (HWD) 8.9 x 9.6 x 13.8 in. (22.5 x 24.3 x 35.2 cm) Net Weight 23.1lb. (10.5 kg) Ventilated Electrical Requirements: Frequency 50/60 Hz Voltage 220V-240V Rotor: Hematocrit Rotor With product quality certification or its equivalent With manufacturer's warranty	1	
26.	Unit	LABORATORY EQUIPMENT, Mini UV Transilluminator Dimension (DxWXH): 247x132x48.5mm Viewing Surface (DxW) 150x80mm; wavelength:365nm; UV Tubes: T5 6W UVA; Power: 12V, 1.5A; Weight:1.4kg; Compatible Gel Type: Mini Gels Compatible gel size: 50x60, 105x60, 125x60mm Temperature: Operation 0-40C Storage:10-70C; Humidity: Operation-20-90%; Storage: -10-90%; Transportation conditions: Temperature: 10-70C; Humidity: 10-90%; Altitude conditions: Up to 2,000m With product quality certification or its equivalent With manufacturer's warranty	1	

27.	Unit	<p>LABORATORY EQUIPMENT, Horizontal Mini Cells Electrophoresis System with Basic Power Supply Cell Specifications: base footprint (LxWxH) 25.5x9.2x5.6cm</p> <p>Base: Buffer Volume: 265-320ml Base gel Size: 7x7cm Gel Tray size: 7x10cm</p> <p>Construction: Base: Molded Clear Plastic Gel Casting gates: Aluminum Safety lid: molded Clear Plastic Electrode wire guard: molded polycarbonate Banana Plugs: Gold-Plated Brass, 4.4 cm length Electrodes: Platinum, 0.25mm diameter Electrical Cables: Dual, 20 AWG, Tinned copper wire cable Flametretardant polyurethane insulation jacket Electrical leads: Nickle Silver Gel Tray: UV- transparent acrylic plastic (UVTP) Combs: Molded plastic and machine acrylic Gel casting device: Polycarbonate 0.64cm silicon foam basebuffer volumes will vary depending on the size and thickness of the gel used.</p> <p>Basic Power Supply Specifications: Input Power nominal: 220-240 VAC, 50-60 Hz Actual: 90-132or 198-264 VAC, 5 mm x 20 mm, Type T input power cord: 3-wire grounded Output Programmable Voltage: 10V to 300V, fully adjustable in 1V steps Voltage accuracy: 2% of reading of 3 volts, whichever is more</p> <p>Ct: 4 ma to 400ma, Fully adjustable in 1 ma steps power (maximum): 75W Terminals: 4 pair ncessed banana jacks, floating in parallel Timer Controller: 001 to 999 minutes fully adjustable Ripple: &lt;1% @ 300V and 70 W Line Regulations: &lt;1% @ 300V and 70 W, 90-132 or 198-264 vac Load regulation: &lt;1% @ 300V for 50% change in output load Drift: &lt;1% @ after 15 mins warm up at 300v and 70w</p>	1	
-----	------	--	---	--

		<p>Noise: 55 dBA at 1 Meter readouts stability: Volts !v, current 1 mA</p> <p><b>SAFETY FEATURES:</b> no load detection: indicated by error message on display Sudden load change detection: indicated by error message on display Overload/short circuit protection: Automatic power limit Input line protection: fuse on both hot and natural Auto-power up after power failure: user selectable, setup maintained safety compliance: EN-61010 EMI: conforms to CE standards for emissions and immunity Class A Display functions: 3 digit LED displays voltage, current or the time Function modes: constant voltage, constant current timer pause User selectable automatic power-up after power failure Environmental Operating Temperature humidity 0-40c Dimensions (LxWxH): 22x21x8.5 cm weight 1.1kg, unit is stable</p> <p><b>Inclusions:</b> 1. Gel Caster 2. UV-Transparent Plastic (UVTP) Tray, &amp;x 10cm 3. 8-well comb, fixed height, 1.5mm thickness 4. 15-well comb, fixed height, 1.5mm thickness 5. Basic Power Supply</p> <p><b>Other Inclusions:</b> 1. Automated Voltage Regulator, 1kva, 1 unit, or any compatible AVR 2. Certified molecular Biology Agarose 25g 3. 50x Tris/Acetic ACid/ Edta/ TAe Nucleic acid electrophoresis Buffer 4. 100 bp molecular Ruler 5. 6x Loading Dye, 1 ml</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>		
<b>28.</b>	Unit	<p>LABORATORY EQUIPMENT, Multiparameter Water Quality Meter Portable Type pH Range -2.000-20.000pH Resolution 0001,0.01,0.1pH Selectable Accuracy: 0.002pH Calibration Points: 1 to 5 points pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range margin of error plus minus 1999.9mV Resolution 0.1, 1mV, selectable Accuracy margin of error plus minus 0.2mV</p>	1	60 Calendar Days

		<p>Calibration Points: 1 point  Ion Range: 0.001~19999 (depending on the range of ISE)  Resolution: 0.001, 0.01, 0.1, 1  Accuracy margin of error <math>\pm 0.5\%</math> F.S.  (monovalent), margin of error plus minus 1% F.S.  (divalent) Measurement Units ppm, mg/L, mol/L, mmol/L  Calibration Points: 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000)  Conductivity Range: 0.01~20.00, 200.0, 2000 micro S/cm, 20.00, 200.0mS/cm  Resolution: 0001, 0.01, 0.1, 1  Accuracy margin of error: <math>\pm 0.5\%</math> F.S.  Calibration Points: 1 to 5 points  Calibration Solutions: 10microS/cm, 84microS/cm, 1413microS/cm, 12.88mS/cm, 111.8mS/cm  Temperature Coefficient Linear (0.0-10.0%/degree celsius) pure water  Reference Temperature 20/25 degree celsius  Cell Constant K=0.1, 1, 10 or custom  TDS Range: 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt  Resolution 001,0.1,1  Accuracy margin of error plus minus 1% F.S.  TDS Factor 0.1~1.0 (default 0.5)  Salinity Range 0.00~42.00psu, 0.00~80.00ppt  Resolution 0.01  Accuracy margin of error: <math>\pm 1\%</math> F.S.  Resistivity Range 0.00~20.00M? Resolution 0.01  Accuracy margin of error <math>\pm 1\%</math> F.S.  DO Range 0.00~20.00mg/L, 0.0~200.0% saturation  Resolution 001mg/L,0.1%  Accuracy margin of error <math>\pm 0.2\text{mg/L}</math>, margin of error plus minus 2.0%  Calibration Points 1 or 2 points  With product quality certification or its equivalent  With manufacturer's warranty</p>		
29.	Unit	<p>LABORATORY EQUIPMENT, PCR (Polymerase Chain Reaction) Machine/Thermal cycler  Instrument Classification: Class III  Display: Touch Screen  Sample Volume: 10-50 <math>\mu\text{l}</math>  Test measuring range: 4-100 degree celsius</p>	1	

30.	Unit	<p>LABORATORY EQUIPMENT, All-in-One Fitness Testing Machine</p> <p>System Assessments include:</p> <p>Biometric Assessments: Blood Pressure, Body Weight, Girth Measurements, Blood Chemistries, Hip-to-Waist Ratio/Body Mass Index, Lung Function Spirometry.</p> <p>Body Composition Assessments: 2, 3 and 7 skinfold sites, Circumference Body Fat Calculation and Bio-Impedance Calculation.</p> <p>Flexibility Protocols: Sit &amp; Reach Test, Trunk and Shoulder Rotation.</p> <p>Cardiovascular Assessments: Bike Ergometer Tests, Treadmill Tests, Adult Field Tests</p> <p>Strength Protocols: Biceps Strength Test, Pushups, Sit-ups, 1- Rep Max Protocols.</p> <p>Features System</p> <p>Computer Interface Unit Integrated, Medical Grade Cart</p> <p>With appropriate/compatible computer hardware and software</p> <p>With all-in-one inkjet Color Printer</p> <p>Interactive Fitness Testing Equipment Skinfold Caliper</p> <p>Wireless Polar Heart Rate System Isometric Strength System Modified Sit and Reach Station Body Weight Platform</p> <p>Fitness Assessment and Exercise Planning Software (including President's Challenge and other assessment protocols)</p> <p>Training Videos &amp; Tutorials Reports</p> <p>Student Personal Profile (up to 20 pages) Graphical and Data Summary Trend (compares 6 assessments)</p> <p>Class Lists and Database Query</p> <p>Parent Mail Merge Letters, Labels and Envelopes</p> <p>Available Options</p> <p>Testing Equipment</p> <p>Treadmill, System Interface and Software Autobike, Interactive Testing Bike</p> <p>Resting Blood Pressure and Heart Rate System Lange Skinfold Caliper Upgrade</p> <p>Bioimpedance Scale Software</p> <p>Health Risk Appraisal (includes CDC Youth Risk Behavior Surveys) Meal Planner</p> <p>Group Reporting Template Builder System</p>	1	
-----	------	---	---	--

		Network Ready (network hardware, software) With product quality certification or its equivalent With manufacturer's warranty		
31.	Unit	LABORATORY EQUIPMENT, Portable Transmittance Spectromata wavelength 380-780 nm; high precision CCD sensor	1	
32.	Unit	LABORATORY EQUIPMENT, Rotary Evaporator 50-2000mL Evaporation flask value; 1.56 L/H Evaporator Capacity; Manual Lifting; brushless Motor; Rotation speed 20- 200RPM; Led display; RT 180 degree Celsius; CE Approved	1	
33.	Unit	LABORATORY EQUIPMENT, UV Transilluminator Unit dimension (cm) 34 x 29.5 x 10 Viewing Size (cm) 26 x 21 Wave length (nm) 254	1	
34.	Unit	LABORATORY EQUIPMENT, Water Quality Monitoring Kit Can test pH (range: 3 - 10.5), nitrate-nitrogen (0-15 ppm), phosphate (0.2 ppm), dissolved oxygen (0-10 ppm), total alkalinity (0-200 ppm), turbidity (0-200 JTU), and temperature (0-5 to 45 degrees centigrade).	2	
35.	Unit	LABORATORY EQUIPMENT, Water Quality Testing Machine Electronic pH tester to 14.0 pH 0.1 pH margin of error $\pm$ 0.1 pH	1	
36.	Unit	MONITOR, Patient Monitor Measured parameter: ECG, CO2, NIBP, IBP, SpO2 High-Definition Capacitive Touch Screen weight.: 4.8 kg, size: 310 x289 x169mm USB interface support Multi display mode; Built in high capacity battery up to 2 hours of continuous work; VGA output for continuous display Display screen: Capacitive screen, support multi-touch operation. 12.1-inch, 1280 x 800 pixels; display channel: Up to 10 waveform channels ECG; Led mode, 5 leads SPO2; measuring range 0-100%; Resolution: 1%; Accuracy- 70% - 100%; Pulse rate: 20-250BPM NIBP, Method: Oscillatory; Measure mode: Manual, AUto STAT; UNit: mmHGg, kPa; Auto measure time: Adjustable Measurement range: 10-270mmHg ECG: Lead mode: 3-lead or 5-lead Lead selection: I, II, III, avR, avL, avF, V	1	

		<p>Heart rate range: Adult: 15-300bpm, Pediatric/Neonatal: 15-300bpm ECG waveform: 2 channels Accuracy: 1 bpm or 1% S-T segment detection Measurement range:-0.2mv~2.0mv Alarm: Yes, audible and visual alarm, alarm events review PO2: Measurement range: 0-100% Accuracy: 70-100%, 2% 0-69%, unspecified Pulse rate: Range: 20-254bpm; Accuracy: 3bpm Respiration: Method: RA-LL impedance Range: Adult:0-120rpm; pediatric/neonatal:0-150rpm; Apnea alarm: Yes Temperature: Range: 0-50 EtCO2; Measurement Mode: Side-stream or mainstream Measurement range: EtCO2: 0-99mmHg; Accuracy: CO2 concentration Apnea alarm: YES With accessories; 2 years warranty and after sales service With product quality certification or its equivalent With manufacturer's warranty</p>		
37.	Unit	<p>MULTIMETER, Water Quality Multi-meter Parameters Measured: Dissolved Oxygen (%), Dissolved Oxygen (mg/L), Temperature, Turbidity, Conductivity, Specific Conductance, Resistivity, Salinity, Water Density, pH, ORP, Ammonium, Nitrate, Chloride, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Depth, Barometer With product quality certification or its equivalent With manufacturer's warranty</p>	1	
38.	Unit	<p>PH METER, Bench Type pH meter Automatic calibration with recognition of up to 16 buffers Automatic temperature compensation Electrode check during calibration Stability icon BNC connector for glass-membrane pH electrodes or Redox electrodes STANDARD EQUIPMENT SUPPLIED: Electrode holding arm and base plate pH combination Gel-filling electrode With integrated temperature sensor (3-in-1 ) AC adapter Measuring Range: Voltage: margin of error plus minus</p>	1	

		<p>1500.0 mV PH: 0 to + 14.00</p> <p>Temperature: -5 to + 105 degree celsius Resolution:</p> <p>Voltage : margin of error plus minus 0.1 mV PH: margin of error plus minus 0.01</p> <p>Temperature: margin of error plus minus 0.1 degree celsius Accuracy:</p> <p>Voltage: margin of error plus minus 0.4 mV pH: margin of error plus minus 0.1</p> <p>Temperature: margin of error plus minus 0.2 degree celsius</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
39.	Unit	<p>SEED MOISTURE METER, Grain Seed Moisture Meter</p> <p>Can test at least 50 types/species of grain or seed</p> <p>High efficiency</p> <p>Digital LCD, Battery input 1.5 AA (Alkaline x4); 50MHz measurement method</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
40.	Unit	<p>STIRRER, Hotplate Stirrer with Stir Bar</p> <p>Plate Material - Coated Aluminum/Silicon Glass Plate</p> <p>Dimensions, mm - 150 x 150</p> <p>Heated Area, mm - 150 x 150</p> <p>Heater Power, Watt - 700 Max plate temp, degree celsius - 325</p> <p>Stirrer Speed, rpm - 100 - 2000</p> <p>Maximum Stirring Capacity, L - 15</p> <p>Compatible with SCT1 - Yes Control accuracy with SCT1 - margin of error plus minus 1 degree celsius</p> <p>Dimensions (w x d x h), mm - 172 x 248 x 120</p> <p>Net weight: 2.5 to 3.5kg</p> <p>Electrical supply – 220V-240V/50-60Hz, 750W IP Rating 32</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
41.	Unit	<p>WATER QUALITY METER, Portable Multi-Parameter</p> <p>Water Quality Analyzer</p> <p>Usage: 1</p> <p>Weight: 7kg</p> <p>Temperature Range: RT-500</p> <p>Power Supply: 200</p>	1	



**Lot 2: Supply and Delivery of Scientific Equipment, Health/ Biomedical Device for the University (2nd Advertisement)**

**ABC: Php7,060,000.00**

Item No	Unit	Particulars	Qty	Delivered weeks/Months
1.	unit	<p>LABORATORY EQUIPMENT,                      Glass-less infrared heating increases efficiency for faster results                      Flexible performance: Provides accurate results at either 0.1% or 10 mg readability, and is ideal for textiles, wastewater, ceramics, food and other applications that require IR heating elements and measurements to 0.1%                      Simple to operate: Set up and operation is extremely easy, just press and hold the temperature or time buttons to set drying parameters, add your sample and begin the test process. This makes the analyzer ideal for routine tasks performed by operators of all skill levels                      Compact, easy-to-clean design: The compact footprint 6.0-7.0 x 5- 6 x 11-12" (15-18 x 12-15x 25 cm-30 cm) of the analyzer is designed to take up less space and the easy-to-clean heating chamber is ideal for frequent use and inexpensive maintenance                      User-friendly touch-button design for easy operation                      Compact design suits any workspace                      Three shut off criteria (manual, timed or auto)                      One standard heating profile                      40 to 200 degree celsius heating range (4-8 degree celsius increments)                      With product quality certification or its equivalent                      With manufacturer's warranty</p>	1	60 Calendar Days
2.	unit	<p>LABORATORY EQUIPMENT, Arduino Artificial Intelligence Suite (Dobot Basic AI Kit) DfRduino Mega2560 V3 Specs:                      Microcontroller: ATmega2560                      Operating Voltage 5V                      Input Voltage (recommended): 7V-12V                      Input Voltage (range): 6V-20V                      Digital I/O Pins: 54 (of which 15 provide PWM output)                      Analog Input Pins: 16 I/O                      DC Current per I/O Pin: 50 mA                      DC Current for 3.3V Pin: 50 mA</p>	1	

		<p>Flash Memory: 256 KB of which 4 KB used by the bootloader</p> <p>SRAM: 8 KB</p> <p>EEPROM: 4 KB Clock Speed: 16MHz</p> <p>Pixy CMUcam5 Specs:</p> <p>Processor: NXP LPC330, 204MHz, dual-core</p> <p>Image Sensor: Omni vision OV9715, 1/4", 1280x800</p> <p>Image Sensor: 75 degrees horizontal, 47 degrees vertical</p> <p>Lens Type: Standard M12 (several different types available)</p> <p>Power Consumption: 140 mA</p> <p>Power Input: USB Input (5V) or unregulated input (6V to 10V)</p> <p>RAM: 264K bytes</p> <p>Flash: 1M bytes</p> <p>Available Data Outputs: UART serial, SPI, I2C, USB, Digital, Analog</p> <p>Size: 2.1" × 1.75" × 1.4"</p> <p>Keycap Color: Red, Green, Blue Supply Voltage: 3.3V -5V</p> <p>Data Type Digital Size: 22mm × 30mm</p> <p>LED Module Specs:</p> <p>Color: Red, Green, Blue</p> <p>Brightness: 2500mcd to 3300mcd</p> <p>Highlight Output Voltage: 3.3V - 5V</p> <p>Wavelength: 520nm - 530nm</p> <p>Angle: 80° - 110° Size 30mm × 20mm Weight: 5g</p>		
3.	unit	<p>LABORATORY EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument</p> <p>Heat capacity: About 10500 J / K</p> <p>Oxygen bomb capacity: 300ml</p> <p>Oxygen charging pressure: 2.8 ~ 3.2 MPa</p> <p>Pressure resistance: water pressure 20MPa</p> <p>Weight: 2.5 kg</p> <p>Overall dimension: 650 * 450 * 500 mm</p> <p>Temperature range: 0 ~ 40 °C</p> <p>Response time: &lt; 4 S</p> <p>Resolution: 0.0001 dpi</p> <p>Linearity: &lt; 0.08% per 5 degree celsius temperature rise range</p> <p>Temperature measurement error: ± 0.003 °C for every 5</p>	1	

		<p>°C temperature rise range</p> <p>Power supply voltage: AC220V ± 10%</p> <p>Humidity: ≤ 80%</p> <p>Power: 30W</p> <p>Ignition voltage: AC24 V</p> <p>Ignition time: 5S</p> <p>With free training/demo</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
4.	Unit	<p>LABORATORY EQUIPMENT, Brake dynamometer</p> <p>Analog/Digital</p> <p>Max Power range: 10-20 hp</p> <p>Max RPM: 2000 rpm</p> <p>Max Torque: 400 Nm</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
5.	Unit	<p>LABORATORY EQUIPMENT, Conventional Milling Machine</p> <p>Drilling Capacity: 45mm diameter</p> <p>Face milling Capacity: 80mm diameter</p> <p>End milling Capacity: 32mm diameter</p> <p>Max. Dist. from Spindle nose to table 450mm</p> <p>Min. dist. From spindle axis to column 260mm</p> <p>Spindle travel: 130 mm</p> <p>Spindle speed @ 60Hz 95-1500RPM</p> <p>Table size: 800x240mm</p> <p>Motor power: 1.5 KW (2HP)</p> <p>Std. Accessories:</p> <p>1 set of collet, 4 milling vise, clamping kit, 10 pc end mill cutter</p> <p>Features: Gear Driven, Head Swivels 90° vertically, micro feed precision. With DRO (Digital Read Out)</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
6.	unit	<p>LABORATORY EQUIPMENT, Diesel engine with common rail intercooler</p> <p>Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder</p> <p>Displacement: 2500/2800 cu. Cm</p> <p>Power: 150-170 hp at 4000 RPM</p> <p>Twin overhead camshaft (DOHC) with timing belt</p> <p>Vibration-damping balancing shafts</p> <p>Common rail-type direct injection with electro-injectors</p> <p>Turbo-supercharger with air-air intercooler</p> <p>Alternator-oil filter-oil pump</p> <p>With product quality certification or its equivalent</p>	1	

		With manufacturer's warranty		
7.	unit	<p>LABORATORY EQUIPMENT, Feed Pelletizer Granulation Machine</p> <p>Spec: Automation</p> <p>Grande: Automatic</p> <p>Brand: Generic</p> <p>Die and Roller Size: 6 inches</p> <p>Dimension: 38 x 12 x 26 inch</p> <p>Motor Power: 7.5 HP</p> <p>Output Capacity: 250 kg/hr</p> <p>Pellet Size: 4-10mm;</p> <p>Phase: Single</p> <p>Product Type: Food Pellet Machine</p> <p>Voltage: 220V-240V</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
8.	Unit	<p>LABORATORY EQUIPMENT, Feed Pelletizer Machine with Electric Motor</p> <p>Power: 5HP Single Phase</p> <p>Working Load: 80-100 kg/hr</p> <p>Default Disc Mill: 3mm</p> <p>Boundary Dimension: 750 x 280 x 700mm</p> <p>Voltage source: 220V-240V</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
9.	unit	<p>LABORATORY EQUIPMENT, Fiber Optic Splicing Machine</p> <p>AC adaptor: 100-220Vac input voltage, 60 Hz; 12 Vdc, 5A output voltage</p> <p>With Lithium Battery: 11.1V, 5.2Ah</p> <p>Applicable to SM, MM, NZ-DS, EDF, Pigtail, FTTH dropcable SC/LC/FC connector</p> <p>Average Splice loss: 0.02dB(SM), 0.01dB(MM), 0.04dB(NZDS), 0.04dB(EDF)</p> <p>Return Loss: <math>\geq</math> to 60dB</p> <p>Splicing time: 8 seconds</p> <p>Heating time: 25 seconds</p> <p>Tension Test: 2.0N</p> <p>Splicing Program: 50 groups</p> <p>Operating Conditions: -10 degree celsius to +50 degree celsius, 0- 95% RH, 0-5000m (altitude)</p> <p>LCD Monitor: 5 inches, high resolution</p> <p>Fiber Image Magnification: X or Y separately views with 400 times magnification</p> <p>Storage Result: 6,000 groups of latest splice results</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	

10.	unit	<p>LABORATORY EQUIPMENT, FM Transmitter Long Range Broadcast Stereo (4 units)</p> <p>Transmitter: FM</p> <p>Frequency range: FM: 87-108MHz</p> <p>Step frequency: less than or equal to 100Khz</p> <p>Frequency stability: margin of error <math>\pm</math> 10PPM</p> <p>Frequency Stabilization Method: PLL</p> <p>Harmonic Noise: less than or equal to -50dB</p> <p>Output Impedance: 50 ohms</p> <p>Rf output power: up to 15W (8 levels adjustable)</p> <p>Pre-highlight: 75 microseconds</p> <p>Distortion sound: 0.3%</p> <p>Bluetooth distance: about 5 meters</p> <p>Frequency response: 50Hz~15000Hz</p> <p>Split: '30dB</p> <p>Frequency adjustment: margin of error <math>\pm</math> 75KHZ</p> <p>Snr: '60 dB</p> <p>Antenna Connector Type: TNC</p> <p>Working temperature: -10-45 degree celsius</p> <p>Transmitter Size: 144x100x59mm</p> <p>Transmitter weight: 545 grams</p> <p>Antenna: Connection Type: TNC</p> <p>Power: 2.15dB</p> <p>Impedance: 50 ohms</p> <p>Maximum stretch length: 1150 mm. (3.77 Feet)</p> <p>Shortest abbreviation length: 210 mm. (0.69 Feet)</p> <p>Feed Length: 5m(16.4ft)</p> <p>Power Supply:</p> <p>Input voltage: 100-240V 50/60Hz</p> <p>Output Power: DC, 12V 3A</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	
11.	unit	<p>LABORATORY EQUIPMENT, Heavy duty over locker machine with table</p> <p>1300-1500 max sewing speed 3/4 thread, 4 color easy threading guide 2-4 thread overlocker</p> <p>LED work light</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	2	
12.	unit	<p>LABORATORY EQUIPMENT, Lab Mill/husker</p> <p>Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr</p> <p>Power: 400 W (0.5 hp) single phase Head power: 1,900 RPM</p> <p>Follow Power: 1,000 RPM Size: 720 x 480 x 1400 mm</p> <p>Weight: 49 kg</p>	1	

		Power source: 220 V, 60 hz With product quality certification or its equivalent With manufacturer's warranty		
13.	unit	<p>LABORATORY EQUIPMENT, LAN Trainer Set: wired and wireless</p> <p>FEATURES</p> <p>PC to PC communication with IEEE 802.3 Wireless LAN-IEEE 802.11 b Token Bus - IEEE 802.4 Network design using RJ45 connectors Error generation Real time graphical representation of entire transmission &amp; reception User friendly software SPECIFICATIONS</p> <p>Hardware</p> <p>PC to PC using RJ-45 Connector Star topology using RJ45 Connector Bus topology using RJ45 Connector Data transmission speed: 10/100 Mbps 4 Nodes</p> <p>Software</p> <p>Bus, Ethernet, Wireless Topology Protocols: Stop N Wait, Go back to N, Selective repeat Packet size: 128, 256, 512, 1024, 2048, 4096, 8192, 16384 Inter Packet delay: 1000-5000 ms Error generation: Acknowledgment lost, bad packet, auto error generation Data encryption &amp; decryption Complete analysis of Network &amp; Protocols Graphic representation of data on s/w screen with packet details Network details indication of computer name, IP address, Port number, status of network, MAC address and OS on computer. Indication of packet serial number, file name, file size, file number, receiver name, Workgroup, receiver IP address, total packets, packet length, time out, protocol, topology, receiver, MAC address, port number, file send start time, file sent completion time, transmission time data rate(Mbps), error. Power Supply : 220 V margin of error plus minus 10%, 50 Hz / 60 Hz on request</p>	1	

		<p>Power Consumption : 1.8 VA (approx.) Evolution of dynamic behavior.</p> <p>Experiments that can be performed</p> <p>Study &amp; implementation of cable designs in networking</p> <p>Implementation of PC to PC with IEEE 802.3</p> <p>Implementation of PC to PC with IEEE 802.11 b</p> <p>Implementation of Bus topology with IEEE 802.4</p> <p>Study of protocols</p> <p>Study of flow control</p> <p>Stop-N-wait</p> <p>Go back to N Selective repeat</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
14.	unit	<p>LABORATORY EQUIPMENT, Laser Cutting and Engraving Machine</p> <p>Work surface area: at least 1290 x 990 mm</p> <p>Dimension: 1850 x 1500 x 1100 mm or equivalent</p> <p>Cutting speed: at least 30000 mm/min</p> <p>Engraving Speed: at least 60000 mm/min</p> <p>Laser Type: CO2 Laser Tube</p> <p>Laser power included: 100 watts</p> <p>Focus lens: 2.0 standard</p> <p>Resolution ratio: 0.025 mm</p> <p>Repositioning accuracy: +/-10%</p> <p>Operating humidity: 5%-80%</p> <p>Graphic format supported: BMP,GIF, JPEG, UNITX, TGA, TIFF, PLT, CDR, DWG, DXF</p> <p>Software compatibility: CorelDraw, Photoshop, AutoCAD, Tajima, CAM/CAD</p> <p>Cooling method: Water cooling(Chiller included)</p> <p>Materials compatibility: Acrylic, Wood, Fabric, Cardboard, Paper, Synthetic Granite, Natural Granite, Leather, Foam board, Glass</p> <p>Extendable size: Front and back of laser machine can be opened suitable for length material process</p> <p>Power requirements: 220V, 50HZ/60HZ Package inclusion:</p> <p>3 unit spare lens</p> <p>4 units spare mirror</p> <p>1 unit rotary</p> <p>1 unit air compressor</p> <p>1 unit chiller</p> <p>Other inclusions:</p> <p>Certificate of distributorship: attached Certificate of</p>	1	

		<p>Authority to sell issued by the Manufacturer or Philippine Distributor/Reseller.</p> <p>Training Availability: Attached training certificate provided by manufacturer's certified trainer.</p> <p>Training and Installation: 2 days onsite training and installation for at least 2 personnel</p> <p>Warranty: 12 months warranty for parts and service After Sale Support; Attached After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Attached certification of parts availability issued by the manufacturer for the project.</p> <p>Delivery Lead Time: Onsite delivery, installation, and commissioning and project within location</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>		
15.	unit	<p>LABORATORY EQUIPMENT, Moisture analyzer (multi-crop)</p> <p>Input voltage: 220V-240V/50-60Hz</p> <p>Weighing capacity [Max]: 200g</p> <p>Weighing units: % Trockenmasse g, % Feuchte</p> <p>Maximum humidity: 80%</p> <p>Maximum operating temperature: 40 degrees Celsius</p> <p>Minimum ambient temperature: 5 degrees Celsius</p> <p>Minimum humidity: 5%</p> <p>Readability (moisture): 0.050%</p> <p>Tare range: 200g</p>	1	
16.	unit	<p>LABORATORY EQUIPMENT, ONE SET (ONE BASE AND ONE ROVER)</p> <p>MULTI- FREQUENCY GNSS RECEIVER FOR STATIC, RTK AND PPK APPLICATION</p> <p>APPLICATION: With static, post Processed and real time kinematic. Display: NO DIGITAL DISPLAY</p> <p>Satellite Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS</p> <p>ACCURACY: MINIMUM</p> <p>High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm</p> <p>Vertical 3.5mm+0.4ppm Static &amp; Fast Static (RMS)</p> <p>Horizontal 2.5 mm + 0.5 ppm</p> <p>Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS)</p> <p>Horizontal 8 mm + 1 ppm</p> <p>Vertical 15 mm + 1 ppm</p> <p>Post Processed Kinematic (RMS) Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP)</p>	1	



		<p>Battery operation must be 16hours with two batteries with led light indicator in battery for charge status must be NTC type approved must be a direct distributor (exclusive) software 1. can be installed in android phones, tablet or any android gadgets</p> <p>2. free and downloadable at anytime controller software must have data quality control like configuring only the allowable tolerable error.</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>		
17.	unit	<p>LABORATORY EQUIPMENT, Petrol Engine, Electronic</p> <p>Fuel Injection (EFI) System Training Equipment 4 cylinders engine, DOHC, 1.3 CC minimum piston displacement, with OBD 2 diagnostic socket, with functional dashboard instrument panel, real and operable engine fuel injection system to illustrate the structure &amp; working process, equipment with intelligent fault setting and appraisal system, include fault setting, troubleshooting &amp; assessment functions, etc., it uses ordinary 220 ACV power which will transformed into 12 DCV as power source, has metal base frame, paint coated, with table top attached to the frame, and metal wheel with lock on base of frame for mobility. with manufacturer warranty on parts and labor, with manual of operation (english version) and include training on the use of equipment</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	
18.	unit	<p>LABORATORY EQUIPMENT, Sheet Metal Box Bending Machine</p> <p>Manual Box Sheet Bender Width: 1220MM (48?)</p> <p>Max thickness: 1.5MM Bending Angle: 0-120°</p> <p>Weight: 95kgs</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	
19.	unit	<p>LABORATORY EQUIPMENT, Single Needle Lock Stitch Machine with Table</p> <p>Lock stitcher</p> <p>Direct electronic feed control</p> <p>Minimum lubrication: Semi-Dry</p> <p>For medium to heavy materials 5,000-4000 stitches per minute</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	2	
20.	set	<p>SHREDDER, Filament Making System</p> <p>Item: Plastic Shredder</p> <p>Dimensions: At least 950 × 750 × 1320 mm</p> <p>Dimensions of top hopper opening: At least 120 x 114 mm</p> <p>Weight: 85 kg</p> <p>Voltage: 220V-240V/50-60Hz</p>	1	

		<p>Total shredding blades: 14 blades (Combination of 2, 3 and 7 teeth blades are possible)</p> <p>Frequency: 50 ?</p> <p>Shredder Capacity: Small PET bottle, Medium PET-bottle, PP bottle caps, etc.</p> <p>Certification: CE Certified Features:</p> <p>Smart Control, Material specific settings</p> <p>Can be converted into 2in1 (Shredder and Granulator)</p> <p>Item: Filament Maker</p> <p>Color: Black powder coated aluminum</p> <p>Temp. Peek Point: 450°C</p> <p>Heating Zones: 4? Independent Controllable</p> <p>Swappable Extruder Design: Yes</p> <p>Mixing screw: High-flow screw</p> <p>Extrusion Data Analysis: Real-time</p> <p>Extrusion Direction: Vertical</p> <p>Compatible Materials: PLA, ABS, UNIT, PS, PETG, TPU, TPE, PPS, PVA, Bio PE, NEW PET, PA (6,12, PACKAGE INCLUSION: 66), PEEK, UNIT, PS, PEKK, PAEK, PEI, PSU, PES, PTFE, PVD+, and many more</p> <p>1x Spool</p> <p>1x Pouch PLA - 1200g</p> <p>1x Pouch cleaning 350g</p> <p>1x Spool Holder</p> <p>Other Inclusions:</p> <p>Certificate of Distributorship: Certificate of authority to sell issued by the manufacturer or its Philippine Distributor/Reseller.</p> <p>Training and Installation: 3 days onsite training and installation for at least 5 personnel. Attached training certificate</p> <p>Warranty: 12 months warranty for parts and service.</p> <p>After Sale Support: After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Parts availability certificate issued by the manufacturer for the project.</p> <p>Delivery: Onsite delivery, installation, and commissioning at Project Location</p> <p>Delivery Lead Time: 90 Days</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>		
21.	unit	<p>TANK, Argon tank with argon gas</p> <p>Cylinder Type Name: T 330</p>	1	

		Tank Gas Capacity in Cubic Feet: 335 Diameter: 9.2 inches Height: 55 inches Weight: 170 pounds With product quality certification or its equivalent With manufacturer's warranty		
--	--	---	--	--

[Use this form for Framework Agreement:]

## ***Framework Agreement List***

Limited to repeatedly required goods and services that are identified to be necessary and desirable, but, by its nature, use or characteristic, the quantity and/ or exact time of need cannot be accurately pre-determined and are not advisable to be carried in stock.

Prepared by the End-User, attached to the APP and submitted to the BAC for the approval of the HOPE.

<b><i>FRAMEWORK AGREEMENT LIST (AGENCY)</i></b>			
<b><i>Item / Service Type and nature of each item/service</i></b>	<b><i>Cost per item or service</i></b>	<b><i>Maximum Quantity</i></b>	<b><i>Total Cost per Item</i></b>
<b><i>TOTAL (Approved Budget for the Contract)</i></b>			
<i>Expected delivery timeframe after receipt of a Call-Off.</i>	<i>Within [no. of days] calendar days upon issuance of Call-off.</i>		
<i>Remarks</i>	<i>Indicate here any other appropriate information as may be necessary.</i>		
<b><i>SIGNATURE OVER PRINTED NAME</i></b>	<b><i>POSITION</i></b>	<b><i>DEPARTMENT/DIVISION</i></b>	

## ***Section VII. Technical Specifications***

### **Notes for Preparing the Technical Specifications**

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying their Bids. In the context of Competitive Bidding, the specifications (*e.g.* production/delivery schedule, manpower requirements, and after-sales service/parts, descriptions of the lots or items) must be prepared to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of transparency, equity, efficiency, fairness, and economy in procurement be realized, responsiveness of bids be ensured, and the subsequent task of bid evaluation and post-qualification facilitated. The specifications should require that all items, materials and accessories to be included or incorporated in the goods be new, unused, and of the most recent or current models, and that they include or incorporate all recent improvements in design and materials unless otherwise provided in the Contract.

Samples of specifications from previous similar procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the goods and the repetitiveness of the type of procurement, it may be advantageous to standardize the General Technical Specifications and incorporate them in a separate subsection. The General Technical Specifications should cover all classes of workmanship, materials, and equipment commonly involved in manufacturing similar goods. Deletions or addenda should then adapt the General Technical Specifications to the particular procurement.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized Philippine and international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the Special Conditions of Contract or the Technical Specifications.

#### **Sample Clause: Equivalency of Standards and Codes**

Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest edition or revision of the relevant standards and codes shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

Reference to brand name and catalogue number should be avoided as far as possible; where unavoidable they should always be followed by the words “*or at least equivalent.*” References to brand names cannot be used when the funding source is the GOP.

Where appropriate, drawings, including site plans as required, may be furnished by the Procuring Entity with the Bidding Documents. Similarly, the Supplier may be requested to provide drawings or samples either with its Bid or for prior review by the Procuring Entity during contract execution.

Bidders are also required, as part of the technical specifications, to complete their statement of compliance demonstrating how the items comply with the specification.

# Technical Specifications

Item	Specification	Statement of Compliance
		<p><i>[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each</i></p> <p><i>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 Bidder’s 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 applicable laws and issuances.]</i></p>
Lot I:        ABC:	<b>Supply and Delivery of ICT Robotics, Technology, Agriculture, Engineering, Electronics, Communication Laboratory Equipment for the University (2<sup>nd</sup> Advertisement)</b>     <b>9,590,000.00</b>	
1.	TABLE, Teacher Demo Table with Sink and Overhead Mirror Demonstration Mirror - Mirror bottom is 29 in. above tabletop.	

	<p>Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a 120V GFCI duplex receptacle with 20-ft. extension cord. 120V, 20A.</p> <p>Built-in Sink - Stainless steel with hand-pump faucet, 2-1/2 gallon fresh water container, and 2-1/2 gallon waste water container.</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
2.	<p>AUTOCLAVE, Chamber Volume: 50 L Working pressure: 0.22 MPa</p> <p>Working temperature: 120-134 degree Celsius, Max. working pressure: 0.23 MPa Adjustment of temperature: 105-134 degree Celsius, Timer: 0-99 min or 0-99 hour 59min</p> <p>Dimension: 590mm x 590mm x 1280mm</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
3.	<p>CABINET, Combination Hazards Storage Cabinet</p> <p>Door style: manual-closed</p> <p>Height: 18 inches</p> <p>Material: Wood</p> <p>With 1000VA Automatic Voltage Regulator (AVR)</p> <p>Input range voltage: 140V-250V</p> <p>Output voltage: 110V and 220V</p> <p>For use with flammables Surface coating: Epoxy</p> <p>Dimensions (DxWxH): 18 x 47 x 18cm</p> <p>No. of doors: 2</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
4.	<p>CABINET, Vented Chemical Storage Cabinet</p> <p>Freestanding, 34" Wide, 115V 60Hz</p> <p>Activated carbon main filter formulated for general purpose storage to contain putrid organic odors as well as fumes</p> <p>With HEPA filter, eliminates exposure to biological particulates</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
5.	<p>CALIBRATION EQUIPMENT, Inverted Microscope</p> <p>Infinite Optical System, Extra wide field eyepiece</p> <p>EW10X/22 Viewing Head: Trinocular head inclined at 30degrees, interpupillary distance 48-75mm</p> <p>Objective LWD infinite plan objective 4X/0.1,WD 17.3mm ; 40X/0.6,WD 2.1mm</p> <p>Infinite plan phase objective PH10X/0.25,WD 10mm, PH20X/0.4,WD 5.1mm</p> <p>Quintuple nosepiece</p> <p>LWD condenser NA 0.3,LWD 72mm(without condenser 150mm) 10X-20X,40X phase annulus plate(fixed)</p> <p>Illumination: Halogen lamp 6V/30W</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	



6.	<p>CALIBRATION EQUIPMENT, NIR spectrometer analyzer portable spectrometer Wavelength Range: 350-950 Stray light: less than or equal to 0.3% Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~100,000K</p> <p>Frequency range: 25-1KHz</p> <p>Chromaticity coordinate accuracy: margin of error plus minus 0.0025 Application: Medical Beauty Light source</p> <p>Frequency sampling rate: 1-10KHz</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
7.	<p>CALIBRATION EQUIPMENT, Analyzer</p> <p>Gases detected CH<sub>4</sub>, CO<sub>2</sub>, H<sub>2</sub>S, O<sub>2</sub> Measuring range</p> <p>CH<sub>4</sub>: (0-100)% vol CO<sub>2</sub>: (0-100)% vol</p> <p>H<sub>2</sub>S: (0~1000) ppm O<sub>2</sub>: (0~30.0)% vol</p> <p>Resolution ratio CH<sub>4</sub>: 1% vol, CO<sub>2</sub>: 1% vol, H<sub>2</sub>S: 1ppm, O<sub>2</sub>: 0.1% vol</p> <p>Sensor Infrared sensor and electrochemical sensor</p> <p>Sensor lifetime greater than or equal to 5years (CH<sub>4</sub>, CO<sub>2</sub>)</p> <p>greater than or equal to 2years (H<sub>2</sub>S, O<sub>2</sub>)</p> <p>Response time CH<sub>4</sub>: less than or equal to 45S (T<sub>90</sub>)</p> <p>CO<sub>2</sub>: less than or equal to 45s (T<sub>90</sub>)</p> <p>H<sub>2</sub>S: less than or equal to 45s (T<sub>90</sub>) O<sub>2</sub>: less than or equal to 45s (T<sub>90</sub>)</p> <p>Alarms Audible--buzzer with greater than or equal to 80dB audible Visible-flashing red LED, greater than or equal to 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals)</p> <p>Continuous working time greater than or equal to 13hours</p> <p>Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours</p> <p>Dust and water resistance IP65</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
8.	<p>CALIBRATION EQUIPMENT, Water Activity Meters</p> <p>Measurement range: 0.1 to: 0.98 Aw (5- 45 degree Celsius)</p> <p>Measuring principle: Electrolytic (surface IR and NTC)</p> <p>Measurement accuracy: AW margin of error plus and minus 0.01 (margin of error plus and minus 15 degrees celsius)</p> <p>precision: margin of error plus and minus 0.003aw within the adjustment range (margin of error plus and minus 0.1 degree celsius ) Resolution: 0.001aw (0.1 degree celsius)</p>	

	<p>Accuracy: margin of error plus and minus 0.010aw within calibration range (margin of error plus and minus 0.15 degree celsius)</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
9.	<p>INCUBATOR, Heating Incubator</p> <p>Temp. Range: 0 to 60 degree Celsius</p> <p>Temp. Accuracy: 0.5 degree celsius (at 37degree celsius)</p> <p>Temp. Uniformity: margin of error plus minus 1.0 degree celsius (at 37 degree celsius)</p> <p>Temp. Increment: 0.1 degree celsius</p> <p>Exterior: 21.25 x 21 x 39.35 in. / 54 x 53.34 x 99.85 cm</p> <p>Interior: 15.75 x 12.75 x 19.75 in. / 40 x 32.4 x 50.2 cm</p> <p>Capacity: 65L, (2.3 cu. ft.)</p> <p>Capacity of BOD bottles: 30 bottles (300ml)</p> <p>Weight: 117 lbs / 53 kg</p> <p>Electrical: 120V, 60HZ or 230V, 60Hz (385W)</p> <p>Operating Temp. Range: +10 to +30degree Celsius</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
10.	<p>INCUBATOR, Vertical Type Shaking Incubator</p> <p>Single Door</p> <p>LCD Display; Rotary shaking, (20~350 rpm)</p> <p>Temp. range (4~60 degree celsius )</p> <p>Timing range (0~9999 h)</p> <p>Shaking plate (250 mL x 38 flask clamp)</p> <p>600 watts; AC 220 V margin of error plus minus 10%</p> <p>Internal size (WDH) (600x410x630mm)</p> <p>External size (WDH) (700x580x1280mm)</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
11.	<p>LABORATORY EQUIPMENT, Antibiotic Disc Dispenser and Zone Reader</p> <p>Diameter Range: 0 to 80.0 mm</p> <p>Resolution: 0.1 mm</p> <p>Illumination: Lamp/LED 12 V/ DC</p> <p>Display: 4 digit seven segment LED display</p> <p>Power Supply: 230V +10% AC, 60Hz</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
12.	<p>LABORATORY EQUIPMENT, Archimedes Principle Apparatus Set SDFDEWER</p> <p>This set includes</p> <p>1 Density set</p> <p>1 Overflow can 1 large rod base</p> <p>1 stainless Steel rod, 45 cm 1 Braided physics string 1 Ohaus Triple-beam balance (with Tare) 1 stainless caliper</p>	

	<p>1 1000 ml beaker  1 100 ml beaker  1 50 ml graduated cylinder  1 Archimedes Principle Experiment  With product quality certification or its equivalent  With manufacturer's warranty</p>	
13.	<p>LABORATORY EQUIPMENT, Automatic Tissue Processor  Processing capacity: 150-300 cassettes (depending on basket size)  Reagent container capacity: 2.3 liters per container (up to 4 containers)  Processing time: 30 minutes to 12 hours (adjustable)  Processing steps: 10 (adjustable)  Agitation speed: 100 to 400 rpm (adjustable)  Vacuum: 0 to -90 kPa (adjustable)  Pressure: 0 to 35 kPa (adjustable)  Paraffin dispenser capacity: 1.5 liters (adjustable)  Touch screen display: 7-inch color display  Dimensions (W x D x H): 500 x 470 x 470 mm (19.7 x 18.5 x 18.5 in.)  Weight: 42-45 kg (93-99 lbs)  Power supply: 100-240V, 50/60Hz, 500VA  With free training/demo  With product quality certification or its equivalent  With manufacturer's warranty</p>	
14.	<p>LABORATORY EQUIPMENT, Benchtop Digital pH meter with calibration solution  Range: 0-14pH/± 1999mv/0-100 °C  Resolution: 0.1/0.01pH/1mv/0.1 °C  Accuracy: ± 0.01pH/±0.1% F.S/± 0.5 °C  Automatic three point calibration  Electrode temperature probe  Storage: at least 50 data groups  With product quality certification or its equivalent  With manufacturer's warranty</p>	
15.	<p>LABORATORY EQUIPMENT, Biomedical Freezer; 490L upright double door; LED display and multiple alarm function; manual defrost mode; Exterior Dimension (mm): 940w*845*D*1860H; Temperature range -20 to -40 degree Celsius; Direct cooling  With product quality certification or its equivalent  With manufacturer's warranty</p>	
16.	<p>LABORATORY EQUIPMENT, Chlorophyll Meter  Measuring area: 2mm*2mm  Measuring mode: 2-wavelength concentration difference of optical methods  Sensors: Silicon semiconductor photodiode  Display mode: measuring value 3 digits liquid crystal display  Measuring times: 2 digits liquid crystal display  Min measuring interval: &lt; 3s  Measuring Range: 0.0-99.9 SPAD, - 10~99.9 degree Celsius</p>	

	<p>Accuracy: margin of error <math>\pm 3.0</math> SPAD margin of error <math>\pm 0.5</math> degree celsius Repeat: margin of error <math>\pm 0.3</math> SPAD margin of error <math>\pm 0.2</math> degree celsius Operating temperature: -10-50 degree celsius Power: 4.2V -2000mah rechargeable Lithium battery Memory capacity: 30KB, automatically calculate and show the average result Weight: 200 grams With product quality certification or its equivalent With manufacturer's warranty</p>	
17.	<p>LABORATORY EQUIPMENT, Conservation of Momentum Apparatus (complete set) This set includes: 2 cart mass 2 small cart 2 Dynamics Track end stop (Pair) 2 Dynamics Track feet 1 Aluminum Dynamics Track 1 small cart rod stand adapter With product quality certification or its equivalent With manufacturer's warranty</p>	
18.	<p>LABORATORY EQUIPMENT, Digital Dry Bath Temperature range Ambient 5-150 degree celsius Temperature display resolution 0.1 degree celsius, 4-digit LED Temperature uniformity margin of error <math>\pm 0.2</math> degree celsius at 37 degree celsius Temperature accuracy margin of error <math>\pm 0.3</math> degree celsius Block chamber Stainless steel Single block unit One standard block Footprint 7.9 x 10.4 in/20 x 28.4 cm Power: 230V, 50/60 Hz, 0.8 A Fuse 1.5 A Inclusion: heating block With product quality certification or its equivalent With manufacturer's warranty</p>	
19.	<p>LABORATORY EQUIPMENT, Digital microscope Technical specifications: Head: Binocular, 360 degrees rotating, 30 degrees inclined. Eyepiece: Wide Field 10x/20mm Nosepiece: Quadruple, reversed Objectives; N-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25 Stage: Double layer, 150x133 mm with X-Y 75x50mm moving range Focusing: Coaxial coarse and fine focusing Illuminator: X-LED3 system with adjustable intensity Condenser: Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm</p>	

	<p>Power supply: 100-240 Vac 50-60 Hz External power adapter: 6Vdc output</p> <p>Camera Camera resolution: 3.14 megapixels Signal output: USB 2.0 Sensor size: 1/2.5" Sensor technology: CMOS Image format: 4/3 full-frame format Image size: 2048x1536 No additional drivers required (Microsoft drivers installed) Image capture: Continuous autonomous image creation, compressed video capture Controlled parameters: Magnitude, degree of amplification, exposure time, colour enhancement Full resolution frame rate (fps) 8@1280x1024 Other resolution frame rate (fps) 30@640x480 Sensitivity: 0.53 V/lux-second Signal/noise ratio: (DB) 40.5 Dynamic range: (DB) 66.5 ADC conversion: 12 Bit Color Depth: 8 Bit Exposure time: 0-1.5 sec Binning 1x1 IR filter: Yes IR filter range (nm): 680 Camera Power: PC USB C-Mount: Yes</p> <p>Tablet Operating system: Windows 10 or latest (64Bit) CPU: Intel Atom Z8350, Quad core CPU speed: 1.44 GHz Graphic card: Intel HD Graphics 400 RAM at least 4 GB LPDDR3 Screen size: LED 10.1inches IPS Multi-Touch Screen Screen resolution: 1920x1200 Storage: HDD 64GB Network: Wireless Bluetooth 4.0 Input: Micro USB (OTG) - USB Type-C - Micro SD card reader Output ports: Microphone - Headphone – Micro HDMI Battery type: Lithium-ion Battery capacity: 6500 mAh Power consumption: 15W Power supply: 5V, 3A Dimensions (mm) 261x167x9 Weight (kg) 0.53 Language: Multi-language</p>	
--	--	--

	<p>With product quality certification or its equivalent With manufacturer's warranty</p>	
20.	<p>LABORATORY EQUIPMENT, DIGITAL WATER VELOCITY METER</p> <p>Digital display in ft/sec or m/sec; Records 30 data sets for later analysis; Rain-proof digital computer; Highly accurate easy flow monitoring; Debris shedding turbo-prop; Lightweight, rugged, and reliable</p> <p>Telescoping handle with staff gauge; Padded carrying case for easy storage CE Certified With manufacturer's warranty</p>	
21.	<p>LABORATORY EQUIPMENT, Handheld XRF for Soil Analysis and Environmental Remediation</p> <p>Dimensions: (W x H x D) 8.3 cm × 28.9 cm × 24.2 cm (3.25 in. × 11.4 in. × 9.5 in.)</p> <p>Weight: 1.70 kg (3.75 lb) with battery, 1.48 kg (3.24 lb) without battery</p> <p>Excitation Source: -watt X-ray tube with application-optimized anode material [rhodium (Rh), silver (Ag), or tungsten (W)]</p> <p>Detector: M series Large-area silicon drift detector</p> <p>Power: Removable 14.4V Lithium-ion battery with hot-swap capability</p> <p>Display: 800 × 480 (WVGA) LCD with capacitive touch screen supporting gesture control</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
22.	<p>LABORATORY EQUIPMENT, LABORATORY OVEN (Forced Air Drying Oven)</p> <p>Capacity: 54L</p> <p>Temp. Range: RT+10~300 degree celsius Temp.</p> <p>Precision: 0.1 degree celsius</p> <p>Temp. Uniformity: less than or equal to Max Temp. margin of error plus minus 2.5 degrees Celsius</p> <p>Circulation Mode: Back heating, forced convection</p> <p>Timing Range: 0-9999min/h</p> <p>Shelves NO. (pc): 2 Display: LCD</p> <p>Power Supply: 220V margin of error plus minus 10% 50/60Hz or 110V margin of error plus minus 10%</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
23.	<p>LABORATORY EQUIPMENT, Laboratory Freezer (-80 °C)</p> <p>External Size (WxDxH) mm : 880x980x1940</p>	

	<p>Internal Size (WxDxH) mm: 488x607x1140</p> <p>Capacity: 338 L</p> <p>type: Vertical</p> <p>Temperature range: -40 to -86 °C Microprocessor control, LCD touch screen</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
24.	<p>LABORATORY EQUIPMENT, Laboratory Refrigerator (1 for Microorganisms &amp; 1 for Reagents)</p> <p>Type: Vertical</p> <p>Capacity: 360L</p> <p>Cooling Type: Forced Air Cooling</p> <p>Defrost Mode: Auto</p> <p>Refrigerant: HC, R600a</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
25.	<p>LABORATORY EQUIPMENT, Microcentrifuge</p> <p>Capacity 24 x 1.5/2 mL Max. Speed 13,300 rpm Max.</p> <p>RCF 17,000 x g</p> <p>Noise Level 56 dB(A)</p> <p>Temperature Range Ambient temperature</p> <p>Certifications/Compliance CSA, CE, IVD Type</p> <p>Benchtop Centrifuge</p> <p>Includes Hematocrit rotor</p> <p>Description Pico 17 Centrifuge,</p> <p>Refrigerated: No</p> <p>Run Time 1 to 99 min. (1 min. increments);</p> <p>HOLD Standards IEC 61010-1, IEC 61010-2-</p> <p>Dimensions (HWD) 8.9 x 9.6 x 13.8 in. (22.5 x 24.3 x 35.2 cm)</p> <p>Net Weight 23.1lb. (10.5 kg)</p> <p>Ventilated Electrical Requirements: Frequency 50/60 Hz</p> <p>Voltage 220V-240V</p> <p>Rotor: Hematocrit Rotor</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
26.	<p>LABORATORY EQUIPMENT, Mini UV Transilluminator</p> <p>Dimension (DxWXH): 247x132x48.5mm)</p> <p>Viewing Surface (DxW) 150x80mm; wavelength:365nm;</p> <p>UV Tubes: T5 6W UVA; Power: 12V, 1.5A; Weight:1.4kg;</p> <p>Compatible Gel Type: Mini Gels</p> <p>Compatible gel size: 50x60, 105x60, 125x60mm</p> <p>Temperature: Operation 0-40C</p> <p>Storage:10-70C; Humidity: Operation-20-90%; Storage: -10-90%; Transportation conditions: Temperature: 10-70C; Humidity: 10-90%; Altitude conditions: Up to 2,000m</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	

27.	<p>LABORATORY EQUIPMENT, Horizontal Mini Cells Electrophoresis System with Basic Power Supply Cell Specifications: base footprint (LxWxH) 25.5x9.2x5.6cm</p> <p>Base: Buffer Volume: 265-320ml Base gel Size: 7x7cm Gel Tray size: 7x10cm</p> <p>Construction: Base: Molded Clear Plastic Gel Casting gates: Aluminum Safety lid: molded Clear Plastic Electrode wire guard: molded polycarbonate Banana Plugs: Gold-Plated Brass, 4.4 cm length Electrodes: Platinum, 0.25mm diameter Electrical Cables: Dual, 20 AWG, Tinned copper wire cable Flametretardant polyurethane insulation jacket Electrical leads: Nickle Silver Gel Tray: UV- transparent acrylic plastic (UVTP) Combs: Molded plastic and machine acrylic Gel casting device: Polycarbonate 0.64cm silicon foam basebuffer volumes will vary depending on the size and thickness of the gel used.</p> <p>Basic Power Supply Specifications: Input Power nominal: 220-240 VAC, 50-60 Hz Actual: 90-132or 198-264 VAC, 5 mm x 20 mm, Type T input power cord: 3-wire grounded Output Programmable Voltage: 10V to 300V, fully adjustable in 1V steps Voltage accuracy: 2% of reading of 3 volts, whichever is more Ct: 4 ma to 400ma, Fully adjustable in 1 ma steps power (maximum): 75W Terminals: 4 pair nessed banana jacks, floating in parallel Timer Controller: 001 to 999 minutes fully adjustable Ripple: &lt;1% @ 300V and 70 W Line Regulations: &lt;1% @ 300V and 70 W, 90-132 or 198-264 vac Load regulation: &lt;1% @ 300V for 50% change in output load Drift: &lt;1% @ after 15 mins warm up at 300v and 70w Noise: 55 dBA at 1 Meter readouts stability: Volts !v, current 1 mA</p> <p>SAFETY FEATURES: no load detection: indicated by error message on display</p>	
-----	---	--



	<p>Sudden load change detection: indicated by error message on display</p> <p>Overload/short circuit protection: Automatic power limit</p> <p>Input line protection: fuse on both hot and natural Auto-power up after power failure: user selectable, setup maintained safety compliance: EN-61010</p> <p>EMI: conforms to CE standards for emissions and immunity Class A Display functions: 3 digit LED displays voltage, current or the time Function modes: constant voltage, constant current timer pause User selectable automatic power-up after power failure</p> <p>Environmental Operating Temperature humidity 0-40c</p> <p>Dimensions (LxWxH): 22x21x8.5 cm weight 1.1kg, unit is stable</p> <p>Inclusions:</p> <ol style="list-style-type: none"> <li>1. Gel Caster</li> <li>2. UV-Transparent Plastic (UVTP) Tray, &amp;x 10cm</li> <li>3. 8-well comb, fixed height, 1.5mm thickness</li> <li>4. 15-well comb, fixed height, 1.5mm thickness</li> <li>5. Basic Power Supply</li> </ol> <p>Other Inclusions:</p> <ol style="list-style-type: none"> <li>1. Automated Voltage Regulator, 1kva, 1 unit, or any compatible AVR</li> <li>2. Certified molecular Biology Agarose 25g</li> <li>3. 50x Tris/Acetic ACid/ Edta/ TAe Nucleic acid electrophoresis Buffer</li> <li>4. 100 bp molecular Ruler</li> <li>5. 6x Loading Dye, 1 ml</li> </ol> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	
28.	<p>LABORATORY EQUIPMENT, Multiparameter Water Quality Meter</p> <p>Portable Type pH Range -2.000-20.000pH</p> <p>Resolution 0001,0.01,0.1pH</p> <p>Selectable Accuracy: 0.002pH</p> <p>Calibration Points: 1 to 5 points</p> <p>pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range margin of error plus minus 1999.9mV Resolution 0.1, 1mV, selectable Accuracy margin of error plus minus 0.2mV</p> <p>Calibration Points: 1 point</p> <p>Ion Range: 0.001~19999 (depending on the range of ISE)</p> <p>Resolution: 0.001, 0.01, 0.1, 1</p> <p>Accuracy margin of error <math>\pm 0.5\%</math> F.S. (monovalent), margin of error plus minus 1% F.S. (divalent)</p> <p>Measurement Units ppm, mg/L, mol/L, mmol/L</p> <p>Calibration Points: 2 to 5 points (0.001, 0.01, 0.1, 1, 10,</p>	

	<p>100, 1000, 10000)  Conductivity Range: 0.01~20.00, 200.0, 2000 micro S/cm, 20.00, 200.0mS/cm  Resolution: 0001, 0.01, 0.1, 1  Accuracy margin of error: <math>\pm 0.5\%</math> F.S.  Calibration Points: 1 to 5 points  Calibration Solutions: 10microS/cm, 84microS/cm, 1413microS/cm, 12.88mS/cm, 111.8mS/cm  Temperature Coefficient Linear (0.0-10.0%/degree celsius) pure water  Reference Temperature 20/25 degree celsius  Cell Constant K=0.1, 1, 10 or custom  TDS Range: 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt  Resolution 001,0.1,1  Accuracy margin of error plus minus 1% F.S.  TDS Factor 0.1~1.0 (default 0.5)  Salinity Range 0.00~42.00psu, 0.00~80.00ppt  Resolution 0.01  Accuracy margin of error: <math>\pm 1\%</math> F.S.  Resistivity Range 0.00~20.00M? Resolution 0.01 Accuracy margin of error <math>\pm 1\%</math> F.S.  DO Range 0.00~20.00mg/L, 0.0~200.0% saturation  Resolution 001mg/L,0.1%  Accuracy margin of error <math>\pm 0.2\text{mg/L}</math>, margin of error plus minus 2.0%  Calibration Points 1 or 2 points  With product quality certification or its equivalent  With manufacturer's warranty</p>	
29.	<p>LABORATORY EQUIPMENT, PCR (Polymerase Chain Reaction) Machine/Thermal cycler  Instrument Classification: Class III  Display: Touch Screen  Sample Volume: 10-50 <math>\mu\text{l}</math>  Test measuring range: 4-100 degree celsius</p>	
30.	<p>LABORATORY EQUIPMENT, All-in-One Fitness Testing Machine  System Assessments include:  Biometric Assessments: Blood Pressure, Body Weight, Girth Measurements, Blood Chemistries, Hip-to-Waist Ratio/Body Mass Index, Lung Function Spirometry.  Body Composition Assessments: 2, 3 and 7 skinfold sites, Circumference Body Fat Calculation and Bio-Impedance Calculation.  Flexibility Protocols: Sit &amp; Reach Test, Trunk and Shoulder Rotation.  Cardiovascular Assessments: Bike Ergometer Tests, Treadmill Tests, Adult Field Tests</p>	

	<p>Strength Protocols: Biceps Strength Test, Pushups, Sit-ups, 1-Rep Max Protocols.</p> <p>Features System</p> <p>Computer Interface Unit Integrated, Medical Grade Cart</p> <p>With appropriate/compatible computer hardware and software</p> <p>With all-in-one inkjet Color Printer</p> <p>Interactive Fitness Testing Equipment Skinfold Caliper</p> <p>Wireless Polar Heart Rate System Isometric Strength System Modified Sit and Reach Station Body Weight Platform</p> <p>Fitness Assessment and Exercise Planning Software (including President's Challenge and other assessment protocols)</p> <p>Training Videos &amp; Tutorials Reports</p> <p>Student Personal Profile (up to 20 pages) Graphical and Data Summary Trend (compares 6 assessments) Class Lists and Database Query</p> <p>Parent Mail Merge Letters, Labels and Envelopes</p> <p>Available Options</p> <p>Testing Equipment</p> <p>Treadmill, System Interface and Software Autobike, Interactive Testing Bike</p> <p>Resting Blood Pressure and Heart Rate System Lange Skinfold Caliper Upgrade</p> <p>Bioimpedance Scale Software</p> <p>Health Risk Appraisal (includes CDC Youth Risk Behavior Surveys) Meal Planner</p> <p>Group Reporting Template Builder System</p> <p>Network Ready (network hardware, software) With product quality certification or its equivalent With manufacturer's warranty</p>	
31.	<p>LABORATORY EQUIPMENT, Portable Transmittance Spectromata wavelength 380-780 nm; high precision CCD sensor</p>	
32.	<p>LABORATORY EQUIPMENT, Rotary Evaporator 50-2000mL Evaporation flask value; 1.56 L/H Evaporator Capacity; Manual Lifting; brushless Motor; Rotation speed 20- 200RPM; Led display; RT 180 degree Celsius; CE Approved</p>	
33.	<p>LABORATORY EQUIPMENT, UV Transilluminator</p> <p>Unit dimension (cm) 34 x 29.5 x 10</p> <p>Viewing Size (cm) 26 x 21 Wave length (nm) 254</p>	

34.	<p>LABORATORY EQUIPMENT, Water Quality Monitoring Kit</p> <p>Can test pH (range: 3 - 10.5), nitrate-nitrogen (0-15 ppm), phosphate (0.2 ppm), dissolved oxygen (0-10 ppm), total alkalinity (0-200 ppm), turbidity (0-200 JTU), and temperature (0-5 to 45 degrees centigrade).</p>	
35.	<p>LABORATORY EQUIPMENT, Water Quality Testing Machine</p> <p>Electronic pH tester to 14.0 pH 0.1 pH margin of error <math>\pm</math> 0.1 pH</p>	
36.	<p>MONITOR, Patient Monitor</p> <p>Measured parameter: ECG, CO2, NIBP, IBP, SpO2</p> <p>High-Definition Capacitive Touch Screen</p> <p>weight.: 4.8 kg, size: 310 x289 x169mm</p> <p>USB interface support</p> <p>Multi display mode; Built in high capacity battery up to 2 hours of continuous work; VGA output for continuous display</p> <p>Display screen: Capacitive screen, support multi-touch operation. 12.1-inch, 1280 x 800 pixels; display channel: Up to 10 waveform channels</p> <p>ECG; Led mode, 5 leads</p> <p>SPO2; measuring range 0-100%; Resolution: 1%; Accuracy- 70%- 100%; Pulse rate: 20-250BPM NIBP, Method: Oscillatory; Measure mode: Manual, AUto STAT; UNit: mmHGg, kPa; Auto measure time: Adjustable Measurement range: 10-270mmHg</p> <p>ECG:</p> <p>Lead mode: 3-lead or 5-lead</p> <p>Lead selection: I, II, III, avR, avL, avF, V</p> <p>Heart rate range: Adult: 15-300bpm, Pediatric/Neonatal: 15-300bpm</p> <p>ECG waveform: 2 channels</p> <p>Accuracy: 1 bpm or 1% S-T segment detection</p> <p>Measurement range:-0.2mv~2.0mv</p> <p>Alarm: Yes, audible and visual alarm, alarm events review</p> <p>PO2: Measurement range: 0-100%</p> <p>Accuracy: 70-100%, 2% 0-69%, unspecified Pulse rate:</p> <p>Range: 20-254bpm; Accuracy: 3bpm Respiration:</p> <p>Method: RA-LL impedance</p> <p>Range: Adult:0-120rpm; pediatric/neonatal:0-150rpm;</p> <p>Apnea alarm: Yes</p> <p>Temperature: Range: 0-50</p> <p>EtCO2; Measurement Mode: Side-stream or mainstream</p> <p>Measurement range: EtCO2: 0-99mmHg;</p>	

	<p>Accuracy: CO2 concentration  Apnea alarm: YES  With accessories; 2 years warranty and after sales service  With product quality certification or its equivalent  With manufacturer's warranty</p>	
37.	<p>MULTIMETER, Water Quality Multi-meter  Parameters Measured: Dissolved Oxygen (%),  Dissolved Oxygen (mg/L), Temperature, Turbidity,  Conductivity, Specific Conductance, Resistivity,  Salinity, Water Density, pH, ORP, Ammonium, Nitrate,  Chloride, Total Dissolved Solids (TDS), Total  Suspended Solids (TSS), Depth, Barometer  With product quality certification or its equivalent  With manufacturer's warranty</p>	
38.	<p>PH METER, Bench Type pH meter  Automatic calibration with recognition of up to 16 buffers  Automatic temperature compensation  Electrode check during calibration Stability icon  BNC connector for glass-membrane pH electrodes or  Redox electrodes  <b>STANDARD EQUIPMENT SUPPLIED:</b>  Electrode holding arm and base plate pH combination  Gel-filling electrode  With integrated temperature sensor (3-in-1 ) AC adapter  Measuring Range: Voltage: margin of error plus minus  1500.0 mV PH: 0 to + 14.00  Temperature: -5 to + 105 degree celsius Resolution: Voltage :  margin of error plus minus 0.1 mV PH: margin of error plus  minus 0.01  Temperature: margin of error plus minus 0.1 degree celsius  Accuracy:  Voltage: margin of error plus minus 0.4 mV pH: margin of  error plus minus 0.1  Temperature: margin of error plus minus 0.2 degree celsius  With product quality certification or its equivalent  With manufacturer's warranty</p>	
39.	<p>SEED MOISTURE METER, Grain Seed Moisture Meter  Can test at least 50 types/species of grain or seed  High efficiency  Digital LCD, Battery input 1.5 AA (Alkaline x4); 50MHz  measurement method  With product quality certification or its equivalent  With manufacturer's warranty</p>	
40.	<p>STIRRER, Hotplate Stirrer with Stir Bar  Plate Material - Coated Aluminum/Silicon Glass Plate  Dimensions, mm - 150 x 150  Heated Area, mm - 150 x 150  Heater Power, Watt - 700 Max plate temp, degree celsius - 325</p>	

	<p>Stirrer Speed, rpm - 100 - 2000  Maximum Stirring Capacity, L - 15  Compatible with SCT1 - Yes Control accuracy with SCT1 - margin of error plus minus 1 degree celsius  Dimensions (w x d x h), mm - 172 x 248 x 120  Net weight: 2.5 to 3.5kg  Electrical supply – 220V-240V/50-60Hz, 750W IP Rating 32  With product quality certification or its equivalent  With manufacturer’s warranty</p>	
41.	<p>WATER QUALITY METER, Portable Multi-Parameter Water Quality Analyzer  Usage: 1  Weight: 7kg  Temperature Range: RT-500  Power Supply: 200</p>	
<b>Lot 2:</b>  <b>ABC:</b>	<p><b>Supply and Delivery of Scientific Equipment, Health/ Biomedical Device for the University (2<sup>nd</sup> Advertisement)</b>  <b>Php 7,060,000.00</b></p>	
1.	<p>LABORATORY EQUIPMENT,  Glass-less infrared heating increases efficiency for faster results  Flexible performance: Provides accurate results at either 0.1% or 10 mg readability, and is ideal for textiles, wastewater, ceramics, food and other applications that require IR heating elements and measurements to 0.1%  Simple to operate: Set up and operation is extremely easy, just press and hold the temperature or time buttons to set drying parameters, add your sample and begin the test process. This makes the analyzer ideal for routine tasks performed by operators of all skill levels  Compact, easy-to-clean design: The compact footprint 6.0-7.0 x 5- 6 x 11-12" (15-18 x 12-15x 25 cm-30 cm) of the analyzer is designed to take up less space and the easy-to-clean heating chamber is ideal for frequent use and inexpensive maintenance  User-friendly touch-button design for easy operation  Compact design suits any workspace  Three shut off criteria (manual, timed or auto)  One standard heating profile  40 to 200 degree celsius heating range (4-8 degree celsius increments)  With product quality certification or its equivalent  With manufacturer’s warranty</p>	
2.	<p>LABORATORY EQUIPMENT, Arduino Artificial Intelligence Suite (Dobot Basic AI Kit) DfRduino Mega2560 V3 Specs:</p>	

	<p>Microcontroller: ATmega2560  Operating Voltage 5V  Input Voltage (recommended): 7V-12V  Input Voltage (range): 6V-20V  Digital I/O Pins: 54 (of which 15 provide PWM output)  Analog Input Pins: 16 I/O  DC Current per I/O Pin: 50 mA  DC Current for 3.3V Pin: 50 mA  Flash Memory: 256 KB of which 4 KB used by the bootloader  SRAM: 8 KB  EEPROM: 4 KB Clock Speed: 16MHz  Pixy CMUcam5 Specs:  Processor: NXP LPC330, 204MHz, dual-core  Image Sensor: Omni vision OV9715, 1/4", 1280x800 Image  Sensor: 75 degrees horizontal, 47 degrees vertical  Lens Type: Standard M12 (several different types available)  Power Consumption: 140 mA  Power Input: USB Input (5V) or unregulated input (6V to 10V)  RAM: 264K bytes  Flash: 1M bytes  Available Data Outputs: UART serial, SPI, I2C, USB,  Digital, Analog  Size: 2.1" × 1.75" × 1.4"  Keypad Color: Red, Green, Blue Supply Voltage: 3.3V -5V  Data Type Digital Size: 22mm × 30mm</p> <p>LED Module Specs:  Color: Red, Green, Blue  Brightness: 2500mcd to 3300mcd  Highlight Output Voltage: 3.3V - 5V  Wavelength: 520nm - 530nm  Angle: 80° - 110° Size 30mm × 20mm Weight: 5g</p>	
3.	<p>LABORATORY EQUIPMENT, Automatic Bomb  Calorimeter Calorific Value Test Meter Machine Instrument  Heat capacity: About 10500 J / K  Oxygen bomb capacity: 300ml  Oxygen charging pressure: 2.8 ~ 3.2 MPa  Pressure resistance: water pressure 20MPa  Weight: 2.5 kg  Overall dimension: 650 * 450 * 500 mm  Temperature range: 0 ~ 40 °C  Response time: &lt; 4 S  Resolution: 0.0001 dpi  Linearity: &lt; 0.08% per 5 degree celsius temperature rise range  Temperature measurement error: ± 0.003 °C for every 5</p>	

	<p>°C temperature rise range  Power supply voltage: AC220V ± 10%  Humidity: ≤ 80%  Power: 30W  Ignition voltage: AC24 V  Ignition time: 5S  With free training/demo  With product quality certification or its equivalent  With manufacturer's warranty</p>	
4.	<p>LABORATORY EQUIPMENT, Brake dynamometer  Analog/Digital  Max Power range: 10-20 hp  Max RPM: 2000 rpm  Max Torque: 400 Nm  With product quality certification or its equivalent  With manufacturer's warranty</p>	
5.	<p>LABORATORY EQUIPMENT, Conventional Milling Machine  Drilling Capacity: 45mm diameter  Face milling Capacity: 80mm diameter  End milling Capacity: 32mm diameter  Max. Dist. from Spindle nose to table 450mm  Min. dist. From spindle axis to column 260mm  Spindle travel: 130 mm  Spindle speed @ 60Hz 95-1500RPM  Table size: 800x240mm  Motor power: 1.5 KW (2HP)  Std. Accessories:  1 set of collet, 4 milling vise, clamping kit, 10 pc end mill cutter  Features: Gear Driven, Head Swivels 90° vertically, micro feed precision. With DRO (Digital Read Out)  With product quality certification or its equivalent  With manufacturer's warranty</p>	
6.	<p>LABORATORY EQUIPMENT, Diesel engine with common rail intercooler  Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder  Displacement: 2500/2800 cu. Cm  Power: 150-170 hp at 4000 RPM  Twin overhead camshaft (DOHC) with timing belt  Vibration-damping balancing shafts  Common rail-type direct injection with electro-injectors  Turbo-supercharger with air-air intercooler  Alternator-oil filter-oil pump  With product quality certification or its equivalent  With manufacturer's warranty</p>	



7.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Granulation Machine</p> <p>Spec: Automation  Grande: Automatic  Brand: Generic  Die and Roller Size: 6 inches  Dimension: 38 x 12 x 26 inch  Motor Power: 7.5 HP  Output Capacity: 250 kg/hr  Pellet Size: 4-10mm;  Phase: Single  Product Type: Food Pellet Machine  Voltage: 220V-240V  With product quality certification or its equivalent  With manufacturer's warranty</p>	
8.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Machine with Electric Motor</p> <p>Power: 5HP Single Phase  Working Load: 80-100 kg/hr  Default Disc Mill: 3mm  Boundary Dimension: 750 x 280 x 700mm  Voltage source: 220V-240V  With product quality certification or its equivalent  With manufacturer's warranty</p>	
9.	<p>LABORATORY EQUIPMENT, Fiber Optic Splicing Machine</p> <p>AC adaptor: 100-220Vac input voltage, 60 Hz; 12 Vdc, 5A output voltage  With Lithium Battery: 11.1V, 5.2Ah  Applicable to SM, MM, NZ-DS, EDF, Pigtail, FTTH dropcable SC/LC/FC connector  Average Splice loss: 0.02dB(SM), 0.01dB(MM), 0.04dB(NZDS), 0.04dB(EDF)  Return Loss: <math>\geq</math> to 60dB  Splicing time: 8 seconds  Heating time: 25 seconds  Tension Test: 2.0N  Splicing Program: 50 groups  Operating Conditions: -10 degree celsius to +50 degree celsius, 0- 95% RH, 0-5000m (altitude)  LCD Monitor: 5 inches, high resolution  Fiber Image Magnification: X or Y separately views with 400 times magnification  Storage Result: 6,000 groups of latest splice results  With product quality certification or its equivalent  With manufacturer's warranty</p>	
10.	<p>LABORATORY EQUIPMENT, FM Transmitter Long Range Broadcast Stereo (4 units)</p>	

	<p>Transmitter: FM  Frequency range: FM: 87-108MHz  Step frequency: less than or equal to 100Khz  Frequency stability: margin of error <math>\pm</math> 10PPM  Frequency Stabilization Method: PLL  Harmonic Noise: less than or equal to -50dB  Output Impedance: 50 ohms  Rf output power: up to 15W (8 levels adjustable)  Pre-highlight: 75 microseconds  Distortion sound: 0.3%  Bluetooth distance: about 5 meters  Frequency response: 50Hz~15000Hz  Split: '30dB  Frequency adjustment: margin of error <math>\pm</math> 75KHZ  Snr: '60 dB  Antenna Connector Type: TNC  Working temperature: -10-45 degree celsius  Transmitter Size: 144x100x59mm  Transmitter weight: 545 grams  Antenna: Connection Type: TNC  Power: 2.15dB  Impedance: 50 ohms  Maximum stretch length: 1150 mm. (3.77 Feet)  Shortest abbreviation length: 210 mm. (0.69 Feet)  Feed Length: 5m(16.4ft)  Power Supply:  Input voltage: 100-240V 50/60Hz  Output Power: DC, 12V 3A  With product quality certification or its equivalent  With manufacturer's warranty</p>	
11.	<p>LABORATORY EQUIPMENT, Heavy duty over locker machine with table  1300-1500 max sewing speed 3/4 thread, 4 color easy threading guide 2-4 thread overlocker  LED work light  With product quality certification or its equivalent  With manufacturer's warranty</p>	
12.	<p>LABORATORY EQUIPMENT, Lab Mill/husker  Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr  Power: 400 W (0.5 hp) single phase Head power: 1,900 RPM  Follow Power: 1,000 RPM Size: 720 x 480 x 1400 mm  Weight: 49 kg  Power source: 220 V, 60 hz  With product quality certification or its equivalent  With manufacturer's warranty</p>	

13.	<p>LABORATORY EQUIPMENT, LAN Trainer Set: wired and wireless</p> <p>FEATURES</p> <p>PC to PC communication with IEEE 802.3</p> <p>Wireless LAN-IEEE 802.11 b</p> <p>Token Bus - IEEE 802.4</p> <p>Network design using RJ45 connectors</p> <p>Error generation</p> <p>Real time graphical representation of entire transmission &amp; reception</p> <p>User friendly software SPECIFICATIONS</p> <p>Hardware</p> <p>PC to PC using RJ-45 Connector</p> <p>Star topology using RJ45 Connector</p> <p>Bus topology using RJ45 Connector</p> <p>Data transmission speed: 10/100 Mbps</p> <p>4 Nodes</p> <p>Software</p> <p>Bus, Ethernet, Wireless Topology</p> <p>Protocols: Stop N Wait, Go back to N, Selective repeat</p> <p>Packet size: 128, 256, 512, 1024, 2048, 4096, 8192, 16384</p> <p>Inter Packet delay: 1000-5000 ms</p> <p>Error generation: Acknowledgment lost, bad packet, auto error generation</p> <p>Data encryption &amp; decryption</p> <p>Complete analysis of Network &amp; Protocols</p> <p>Graphic representation of data on s/w screen with packet details</p> <p>Network details indication of computer name, IP address, Port number, status of network, MAC address and OS on computer.</p> <p>Indication of packet serial number, file name, file size, file number, receiver name, Workgroup, receiver IP address, total packets, packet length, time out, protocol, topology, receiver, MAC address, port number, file send start time, file sent completion time, transmission time data rate(Mbps), error.</p> <p>Power Supply : 220 V margin of error plus minus 10%, 50 Hz / 60 Hz on request</p> <p>Power Consumption : 1.8 VA (approx.) Evolution of dynamic behavior.</p> <p>Experiments that can be performed</p> <p>Study &amp; implementation of cable designs in networking</p> <p>Implementation of PC to PC with IEEE 802.3</p> <p>Implementation of PC to PC with IEEE 802.11 b</p> <p>Implementation of Bus topology with IEEE 802.4</p>	
-----	--	--

	<p>Study of protocols  Study of flow control  Stop-N-wait  Go back to N Selective repeat  With product quality certification or its equivalent  With manufacturer's warranty</p>	
14.	<p>LABORATORY EQUIPMENT, Laser Cutting and Engraving Machine  Work surface area: at least 1290 x 990 mm  Dimension: 1850 x 1500 x 1100 mm or equivalent  Cutting speed: at least 30000 mm/min  Engraving Speed: at least 60000 mm/min  Laser Type: CO2 Laser Tube  Laser power included: 100 watts  Focus lens: 2.0 standard  Resolution ratio: 0.025 mm  Repositioning accuracy: +/-10%  Operating humidity: 5%-80%  Graphic format supported: BMP,GIF, JPEG, UNITX, TGA, TIFF, PLT, CDR, DWG, DXF  Software compatibility: CorelDraw, Photoshop, AutoCAD, Tajima, CAM/CAD  Cooling method: Water cooling(Chiller included)  Materials compatibility: Acrylic, Wood, Fabric, Cardboard, Paper, Synthetic Granite, Natural Granite, Leather, Foam board, Glass  Extendable size: Front and back of laser machine can be opened suitable for length material process  Power requirements: 220V, 50HZ/60HZ Package inclusion:  5 unit spare lens  6 units spare mirror  1 unit rotary  1 unit air compressor  1 unit chiller  Other inclusions:  Certificate of distributorship: attached Certificate of Authority to sell issued by the Manufacturer or Philippine Distributor/Reseller.  Training Availability: Attached training certificate provided by manufacturer's certified trainer.  Training and Installation: 2 days onsite training and installation for at least 2 personnel  Warranty: 12 months warranty for parts and service  After Sale Support; Attached After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p>	

	<p>Attached certification of parts availability issued by the manufacturer for the project.</p> <p>Delivery Lead Time: Onsite delivery, installation, and commissioning and project within location</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
15.	<p>LABORATORY EQUIPMENT, Moisture analyzer (multi-crop)</p> <p>Input voltage: 220V-240V/50-60Hz</p> <p>Weighing capacity [Max]: 200g</p> <p>Weighing units: % Trockenmasse g, % Feuchte</p> <p>Maximum humidity: 80%</p> <p>Maximum operating temperature: 40 degrees Celsius</p> <p>Minimum ambient temperature: 5 degrees Celsius</p> <p>Minimum humidity: 5%</p> <p>Readability (moisture): 0.050%</p> <p>Tare range: 200g</p>	
16.	<p>LABORATORY EQUIPMENT, ONE SET (ONE BASE AND ONE ROVER)</p> <p>MULTI- FREQUENCY GNSS RECEIVER FOR STATIC, RTK AND PPK APPLICATION</p> <p>APPLICATION: With static, post Processed and real time kinematic. Display: NO DIGITAL DISPLAY</p> <p>Satellite Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS</p> <p>ACCURACY: MINIMUM</p> <p>High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm</p> <p>Vertical 3.5mm+0.4ppm Static &amp; Fast Static (RMS)</p> <p>Horizontal 2.5 mm + 0.5 ppm</p> <p>Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS)</p> <p>Horizontal 8 mm + 1 ppm</p> <p>Vertical 15 mm + 1 ppm</p> <p>Post Processed Kinematic (RMS) Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP)</p> <p>Battery operation must be 16hours with two batteries with led light indicator in battery for charge status must be NTC type approved must be a direct distributor (exclusive) software 1. can be installed in android phones, tablet or any android gadgets</p> <p>2. free and downloadable at anytime controller software must have data quality control like configuring only the allowable tolerable error.</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
17.	<p>LABORATORY EQUIPMENT, Petrol Engine, Electronic Fuel Injection (EFI) System Training Equipment 4 cylinders engine, DOHC, 1.3 CC minimum piston displacement, with OBD 2 diagnostic socket, with functional dashboard instrument panel, real and operable engine fuel injection system to illustrate the structure &amp; working process, equipment</p>	

	<p>with intelligent fault setting and appraisal system, include fault setting, troubleshooting &amp; assessment functions, etc., it uses ordinary 220 ACV power which will transformed into 12 DCV as power source, has metal base frame, paint coated, with table top attached to the frame, and metal wheel with lock on base of frame for mobility. with manufacturer warranty on parts and labor, with manual of operation (english version) and include training on the use of equipment  With product quality certification or its equivalent  With manufacturer's warranty</p>	
18.	<p>LABORATORY EQUIPMENT, Sheet Metal Box Bending Machine  Manual Box Sheet Bender Width: 1220MM (48?)  Max thickness: 1.5MM Bending Angle: 0-120°  Weight: 95kgs  With product quality certification or its equivalent  With manufacturer's warranty</p>	
19.	<p>LABORATORY EQUIPMENT, Single Needle Lock Stitch Machine with Table  Lock stitcher  Direct electronic feed control  Minimum lubrication: Semi-Dry  For medium to heavy materials 5,000-4000 stitches per minute  With product quality certification or its equivalent  With manufacturer's warranty</p>	
20.	<p>SHREDDER, Filament Making System  Item: Plastic Shredder  Dimensions: At least 950 × 750 × 1320 mm  Dimensions of top hopper opening: At least 120 x 114 mm  Weight: 85 kg  Voltage: 220V-240V/50-60Hz  Total shredding blades: 14 blades (Combination of 2, 3 and 7 teeth blades are possible)  Frequency: 50 ?  Shredder Capacity: Small PET bottle, Medium PET-bottle, PP bottle caps, etc.  Certification: CE Certified Features:  Smart Control, Material specific settings  Can be converted into 2in1 (Shredder and Granulator)  Item: Filament Maker  Color: Black powder coated aluminum  Temp. Peek Point: 450°C  Heating Zones: 4? Independent Controllable  Swappable Extruder Design: Yes  Mixing screw: High-flow screw  Extrusion Data Analysis: Real-time  Extrusion Direction: Vertical  Compatible Materials: PLA, ABS, UNIT, PS, PETG, TPU, TPE, PPS, PVA, Bio PE, NEW PET, PA (6,12,</p>	

	<p>PACKAGE INCLUSION: 66), PEEK, UNIT, PS, PEKK, PAEK, PEI, PSU, PES, PTFE, PVD+, and many more</p> <p>1x Spool</p> <p>1x Pouch PLA - 1200g</p> <p>1x Pouch cleaning 350g</p> <p>1x Spool Holder</p> <p>Other Inclusions:</p> <p>Certificate of Distributorship: Certificate of authority to sell issued by the manufacturer or its Philippine Distributor/Reseller.</p> <p>Training and Installation: 3 days onsite training and installation for at least 5 personnel. Attached training certificate</p> <p>Warranty: 12 months warranty for parts and service.</p> <p>After Sale Support: After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Parts availability certificate issued by the manufacturer for the project.</p> <p>Delivery: Onsite delivery, installation, and commissioning at Project Location</p> <p>Delivery Lead Time: 90 Days</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	
21.	<p>TANK, Argon tank with argon gas</p> <p>Cylinder Type Name: T 330</p> <p>Tank Gas Capacity in Cubic Feet: 335</p> <p>Diameter: 9.2 inches</p> <p>Height: 55 inches</p> <p>Weight: 170 pounds</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	

## BILL OF QUANTITIES

Name of Project: **2024-4E Supply and Delivery of Various Laboratory Equipment for the University (Second Advertisement)**

Location: **NVSU, Bayombong Campus**

Mode of Implementation: **Public Bidding**

Source of Fund: **F101**

Number of Calendar Days to Complete: **60 calendar days**

Approved Budget for the Contract: **Php16,650,000.00**

Lot 1: **Supply and Delivery of ICT Robotics, Technology, Agriculture, Engineering, Electronics, Communication Laboratory Equipment for the University (2<sup>nd</sup> Advertisement)**

ABC: **Php9,590,000.00**

Item No.	Particulars	Qty	Unit of Measurement	Unit Cost	Total Cost
1.	<p>TABLE, Teacher Demo Table with Sink and Overhead Mirror                      Demonstration Mirror - Mirror bottom is 29 in. above tabletop.                      Cooktop - Ceramic glass with two burners (1,200 watts each), 15-ft extension cord, and a 120V GFCI duplex receptacle with 20-ft. extension cord. 120V, 20A.                      Built-in Sink - Stainless steel with hand-pump faucet, 2-1/2 gallon fresh water container, and 2-1/2 gallon waste water container.                      With product quality certification or its equivalent                      With manufacturer's warranty</p>	1	unit	80,000.00	80,000.00
2.	<p>AUTOCLAVE, Chamber Volume: 50 L Working pressure: 0.22 MPa                      Working temperature: 120-134 degree Celsius, Max. working pressure: 0.23 MPa Adjustment of temperature: 105-134 degree Celsius, Timer: 0-99 min or 0-99 hour 59min                      Dimension: 590mm x 590mm x 1280mm                      With product quality certification or its equivalent                      With manufacturer's warranty</p>	1	Unit	290,000.00	290,000.00
3.	<p>CABINET, Combination Hazards Storage Cabinet                      Door style: manual-closed                      Height: 18 inches                      Material: Wood</p>	1	Unit	220,000.00	220,000.00



	<p>With 1000VA Automatic Voltage Regulator (AVR)  Input range voltage: 140V-250V  Output voltage: 110V and 220V  For use with flammables Surface coating: Epoxy  Dimensions (DxWxH): 18 x 47 x 18cm  No. of doors: 2  With product quality certification or its equivalent  With manufacturer's warranty</p>				
4.	<p>CABINET, Vented Chemical Storage Cabinet  Freestanding, 34" Wide, 115V 60Hz  Activated carbon main filter formulated for general purpose storage to contain putrid organic odors as well as fumes  With HEPA filter, eliminates exposure to biological particulates  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	210,000.00	210,000.00
5.	<p>CALIBRATION EQUIPMENT, Inverted Microscope  Infinite Optical System, Extra wide field eyepiece  EW10X/22 Viewing Head: Trinocular head inclined at 30degrees, interpupillary distance 48-75mm  Objective LWD infinite plan objective 4X/0.1,WD 17.3mm ; 40X/0.6,WD 2.1mm  Infinite plan phase objective PH10X/0.25,WD 10mm, PH20X/0.4,WD 5.1mm  Quintuple nosepiece  LWD condenser NA 0.3,LWD 72mm(without condenser 150mm) 10X-20X,40X phase annulus plate(fixed)  Illumination: Halogen lamp 6V/30W  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	80,000.00	80,000.00
6.	<p>CALIBRATION EQUIPMENT, NIR spectrometer analyzer portable spectrometer Wavelength Range: 350-950 Stray light: less than or equal to 0.3%</p>	1	Unit	200,000.00	200,000.00

	<p>Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~ 100,000K</p> <p>Frequency range: 25-1KHz</p> <p>Chromaticity coordinate accuracy: margin of error plus minus 0.0025</p> <p>Application: Medical Beauty Light source</p> <p>Frequency sampling rate: 1-10KHz</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
7.	<p>CALIBRATION EQUIPMENT, Analyzer</p> <p>Gases detected CH4, CO2, H2S, O2</p> <p>Measuring range</p> <p>CH4: (0-100)% vol CO2: (0-100)% vol</p> <p>H2S: (0~1000) ppm O2: (0~30.0)% vol</p> <p>Resolution ratio CH4: 1% vol, CO2: 1% vol, H2S: 1ppm, O2: 0.1% vol</p> <p>Sensor Infrared sensor and electrochemical sensor</p> <p>Sensor lifetime greater than or equal to 5years (CH4, CO2)</p> <p>greater than or equal to 2years (H2S, O2)</p> <p>Response time CH4: less than or equal to 45S (T90)</p> <p>CO2: less than or equal to 45s (T90)</p> <p>H2S: less than or equal to 45s (T90)</p> <p>O2: less than or equal to 45s (T90)</p> <p>Alarms Audible--buzzer with greater than or equal to 80dB audible Visible- flashing red LED, greater than or equal to 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals)</p> <p>Continuous working time greater than or equal to 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours</p> <p>Dust and water resistance IP65</p> <p>With product quality certification or its equivalent</p>	1	Unit	100,000.00	100,000.00

	With manufacturer's warranty				
8.	<p>CALIBRATION EQUIPMENT, Water Activity Meters Measurement range: 0.1 to: 0.98 Aw (5- 45 degree Celsius) Measuring principle: Electrolytic (surface IR and NTC) Measurement accuracy: AW margin of error plus and minus 0.01 (margin of error plus and minus 15 degrees celsius) precision: margin of error plus and minus 0.003aw within the adjustment range (margin of error plus and minus 0.1 degree celsius ) Resolution: 0.001aw (0.1 degree celsius) Accuracy: margin of error plus and minus 0.010aw within calibration range (margin of error plus and minus 0.15 degree celsius) With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	190,000.00	190,000.00
9.	<p>INCUBATOR, Heating Incubator Temp. Range: 0 to 60 degree Celsius Temp. Accuracy: 0.5 degree celsius (at 37degree celsius) Temp. Uniformity: margin of error plus minus 1.0 degree celsius (at 37 degree celsius) Temp. Increment: 0.1 degree celsius Exterior: 21.25 x 21 x 39.35 in. / 54 x 53.34 x 99.85 cm Interior: 15.75 x 12.75 x 19.75 in. / 40 x 32.4 x 50.2 cm Capacity: 65L, (2.3 cu. ft.) Capacity of BOD bottles: 30 bottles (300ml) Weight: 117 lbs / 53 kg Electrical: 120V, 60HZ or 230V, 60Hz (385W) Operating Temp. Range: +10 to +30degree Celsius With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	190,000.00	190,000.00
10.	<p>INCUBATOR, Vertical Type Shaking Incubator Single Door</p>	1	Unit	220,000.00	220,000.00

	<p>LCD Display; Rotary shaking, (20~350 rpm)  Temp. range (4~60 degree celsius )  Timing range (0~9999 h)  Shaking plate (250 mL x 38 flask clamp)  600 watts; AC 220 V margin of error plus minus 10%  Internal size (WDH) (600x410x630mm)  External size (WDH) (700x580x1280mm)  With product quality certification or its equivalent  With manufacturer's warranty</p>				
11.	<p>LABORATORY EQUIPMENT, Antibiotic Disc  Dispenser and Zone Reader  Diameter Range: 0 to 80.0 mm  Resolution: 0.1 mm  Illumination: Lamp/LED 12 V/ DC  Display: 4 digit seven segment LED display  Power Supply: 230V +10% AC, 60Hz  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	70,000.00	70,000.00
12.	<p>LABORATORY EQUIPMENT, Archimedes Principle Apparatus Set SDFDEWER  This set includes  1 Density set  1 Overflow can 1 large rod base  1 stainless Steel rod, 45 cm 1 Braided physics string 1 Ohaus Triple-beam balance (with Tare) 1 stainless caliper  1 1000 ml beaker  1 100 ml beaker  1 50 ml graduated cylinder  1 Archimedes Principle Experiment  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Set	70,000.00	70,000.00
13.	<p>LABORATORY EQUIPMENT, Automatic Tissue Processor  Processing capacity: 150-300 cassettes (depending on basket size)  Reagent container capacity: 2.3 liters per container (up to 4 containers)</p>	1	Unit	2,000,000.00	2,000,000.00

	<p>Processing time: 30 minutes to 12 hours (adjustable)</p> <p>Processing steps: 10 (adjustable)</p> <p>Agitation speed: 100 to 400 rpm (adjustable)</p> <p>Vacuum: 0 to -90 kPa (adjustable)</p> <p>Pressure: 0 to 35 kPa (adjustable)</p> <p>Paraffin dispenser capacity: 1.5 liters (adjustable)</p> <p>Touch screen display: 7-inch color display</p> <p>Dimensions (W x D x H): 500 x 470 x 470 mm (19.7 x 18.5 x 18.5 in.)</p> <p>Weight: 42-45 kg (93-99 lbs)</p> <p>Power supply: 100-240V, 50/60Hz, 500VA</p> <p>With free training/demo</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
14.	<p>LABORATORY EQUIPMENT, Benchtop Digital pH meter with calibration solution</p> <p>Range: 0-14pH/± 1999mv/0-100 °C</p> <p>Resolution: 0.1/0.01pH/1mv/0.1 °C</p> <p>Accuracy: ± 0.01pH/±0.1% F.S/± 0.5 °C</p> <p>Automatic three point calibration</p> <p>Electrode temperature probe</p> <p>Storage: at least 50 data groups</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	60,000.00	60,000.00
15.	<p>LABORATORY EQUIPMENT, Biomedical Freezer; 490L upright double door; LED display and multiple alarm function; manual defrost mode; Exterior Dimension (mm): 940w*845*D*1860H; Temperature range -20 to -40 degree Celsius; Direct cooling</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	350,000.00	350,000.00
16.	<p>LABORATORY EQUIPMENT, Chlorophyll Meter</p> <p>Measuring area: 2mm*2mm</p> <p>Measuring mode:2-wavelength concentration difference of optical methods</p> <p>Sensors: Silicon semiconductor photodiode</p>	1	Unit	120,000.00	120,000.00

	<p>Display mode: measuring value 3 digits liquid crystal display</p> <p>Measuring times: 2 digits liquid crystal display</p> <p>Min measuring interval:&lt; 3s</p> <p>Measuring Range:0.0-99.9 SPAD, -10~99.9 degree Celsius</p> <p>Accuracy: margin of error <math>\pm</math> 3.0 SPAD</p> <p>margin of error <math>\pm</math> 0.5 degree celsius</p> <p>Repeat: margin of error <math>\pm</math> 0.3 SPAD</p> <p>margin of error <math>\pm</math> 0.2 degree celsius</p> <p>Operating temperature: -10-50 degree celsius</p> <p>Power: 4.2V -2000mah rechargeable Lithium battery</p> <p>Memory capacity: 30KB, automatically calculate and show the average result</p> <p>Weight: 200 grams</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
17.	<p>LABORATORY EQUIPMENT, Conservation of Momentum Apparatus (complete set)</p> <p>This set includes:</p> <p>2 cart mass</p> <p>2 small cart</p> <p>2 Dynamics Track end stop (Pair)</p> <p>2 Dynamics Track feet</p> <p>1 Aluminum Dynamics Track</p> <p>1 small cart rod stand adapter</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Set	70,000.00	70,000.00
18.	<p>LABORATORY EQUIPMENT, Digital Dry Bath</p> <p>Temperature range Ambient 5-150 degree celsius</p> <p>Temperature display resolution 0.1 degree celsius, 4-digit LED</p> <p>Temperature uniformity margin of error <math>\pm</math> 0.2 degree celsius at 37 degree celsius</p> <p>Temperature accuracy margin of error <math>\pm</math> 0.3 degree celsius</p>	1	Unit	90,000.00	90,000.00

	<p>Block chamber Stainless steel Single block unit One standard block  Footprint 7.9 x 10.4 in/20 x 28.4 cm  Power: 230V, 50/60 Hz, 0.8 A  Fuse 1.5 A  Inclusion: heating block  With product quality certification or its equivalent  With manufacturer's warranty</p>				
19.	<p>LABORATORY EQUIPMENT,  Digital microscope  Technical specifications:  Head: Binocular, 360 degrees rotating, 30 degrees inclined.  Eyepiece: Wide Field 10x/20mm  Nosepiece: Quadruple, reversed Objectives; N-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25  Stage: Double layer, 150x133 mm with X-Y 75x50mm moving range  Focusing: Coaxial coarse and fine focusing  Illuminator: X-LED3 system with adjustable intensity  Condenser: Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm  Power supply: 100-240 Vac 50-60 Hz  External power adapter: 6Vdc output</p> <p>Camera  Camera resolution: 3.14 megapixels  Signal output: USB 2.0  Sensor size: 1/2.5"  Sensor technology: CMOS  Image format: 4/3 full-frame format  Image size: 2048x1536  No additional drivers required (Microsoft drivers installed)  Image capture: Continuous autonomous image creation, compressed video capture  Controlled parameters: Magnitude, degree of amplification, exposure time, colour enhancement  Full resolution frame rate (fps) 8@1280x1024</p>	1	Unit	110,000.00	110,000.00

	<p>Other resolution frame rate (fps) 30@640x480 Sensitivity: 0.53 V/lux-second Signal/noise ratio: (DB) 40.5 Dynamic range: (DB) 66.5 ADC conversion: 12 Bit Color Depth: 8 Bit Exposure time: 0-1.5 sec Binning 1x1 IR filter: Yes IR filter range (nm): 680 Camera Power: PC USB C-Mount: Yes</p> <p>Tablet Operating system: Windows 10 or latest (64Bit) CPU: Intel Atom Z8350, Quad core CPU speed: 1.44 GHz Graphic card: Intel HD Graphics 400 RAM at least 4 GB LPDDR3 Screen size: LED 10.1inches IPS Multi-Touch Screen Screen resolution: 1920x1200 Storage: HDD 64GB Network: Wireless Bluetooth 4.0 Input: Micro USB (OTG) - USB Type-C - Micro SD card reader Output ports: Microphone - Headphone – Micro HDMI Battery type: Lithium-ion Battery capacity: 6500 mAh Power consumption: 15W Power supply: 5V, 3A Dimensions (mm) 261x167x9 Weight (kg) 0.53 Language: Multi-language With product quality certification or its equivalent With manufacturer’s warranty</p>				
20.	<p>LABORATORY EQUIPMENT, DIGITAL WATER VELOCITY METER</p> <p>Digital display in ft/sec or m/sec; Records 30 data sets for later analysis; Rain-proof digital computer; Highly accurate easy flow monitoring; Debris</p>	1	Unit	60,000.00	60,000.00



	shedding turbo-prop; Lightweight, rugged, and reliable Telescoping handle with staff gauge; Padded carrying case for easy storage CE Certified With manufacturer's warranty				
21.	<p>LABORATORY EQUIPMENT, Handheld XRF for Soil Analysis and Environmental Remediation</p> <p>Dimensions: (W x H x D) 8.3 cm x 28.9 cm x 24.2 cm (3.25 in. x 11.4 in. x 9.5 in.)</p> <p>Weight: 1.70 kg (3.75 lb) with battery, 1.48 kg (3.24 lb) without battery</p> <p>Excitation Source: -watt X-ray tube with application-optimized anode material [rhodium (Rh), silver (Ag), or tungsten (W)]</p> <p>Detector: M series</p> <p>Large-area silicon drift detector</p> <p>Power: Removable 14.4V Lithium-ion battery with hot-swap capability</p> <p>Display: 800 x 480 (WVGA) LCD with capacitive touch screen supporting gesture control</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	1,200,000.00	1,200,000.00
22.	<p>LABORATORY EQUIPMENT, LABORATORY OVEN (Forced Air Drying Oven)</p> <p>Capacity: 54L</p> <p>Temp. Range: RT+10~300 degree celsius Temp.</p> <p>Precision: 0.1 degree celsius</p> <p>Temp. Uniformity: less than or equal to Max Temp. margin of error plus minus 2.5 degrees Celsius</p> <p>Circulation Mode: Back heating, forced convection</p> <p>Timing Range: 0-9999min/h</p> <p>Shelves NO. (pc): 2 Display: LCD</p> <p>Power Supply: 220V margin of error plus minus 10%</p> <p>50/60Hz or 110V margin of error plus minus 10%</p> <p>With product quality certification or its equivalent</p>	1	Unit	60,000.00	60,000.00

	With manufacturer's warranty				
23.	<p>LABORATORY EQUIPMENT, Laboratory Freezer (-80 °C) External Size (WxDxH) mm : 880x980x1940 Internal Size (WxDxH) mm: 488x607x1140 Capacity: 338 L type: Vertical Temperature range: -40 to -86 °C Microprocessor control, LCD touch screen With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	350,000.00	350,000.00
24.	<p>LABORATORY EQUIPMENT, Laboratory Refrigerator (1 for Microorganisms &amp; 1 for Reagents) Type: Vertical Capacity: 360L Cooling Type: Forced Air Cooling Defrost Mode: Auto Refrigerant: HC, R600a With product quality certification or its equivalent With manufacturer's warranty</p>	2	Unit	130,000.00	260,000.00
25.	<p>LABORATORY EQUIPMENT, Microcentrifuge Capacity 24 x 1.5/2 mL Max. Speed 13,300 rpm Max. RCF 17,000 x g Noise Level 56 dB(A) Temperature Range Ambient temperature Certifications/Compliance CSA, CE, IVD Type Benchtop Centrifuge Includes Hematocrit rotor Description Pico 17 Centrifuge, Refrigerated: No Run Time 1 to 99 min. (1 min. increments); HOLD Standards IEC 61010-1, IEC 61010-2- Dimensions (HWD) 8.9 x 9.6 x 13.8 in. (22.5 x 24.3 x 35.2 cm) Net Weight 23.1lb. (10.5 kg)</p>	1	Unit	280,000.00	280,000.00

	<p>Ventilated Electrical Requirements: Frequency 50/60 Hz Voltage 220V-240V</p> <p>Rotor: Hematocrit Rotor With product quality certification or its equivalent With manufacturer's warranty</p>				
26.	<p>LABORATORY EQUIPMENT, Mini UV Transilluminator</p> <p>Dimension (DxWXH): 247x132x48.5mm</p> <p>Viewing Surface (DxW) 150x80mm; wavelength:365nm;</p> <p>UV Tubes: T5 6W UVA; Power: 12V, 1.5A; Weight:1.4kg;</p> <p>Compatible Gel Type: Mini Gels Compatible gel size: 50x60, 105x60, 125x60mm</p> <p>Temperature: Operation 0-40C Storage:10-70C; Humidity: Operation-20-90%; Storage: -10-90%; Transportation conditions: Temperature: 10-70C; Humidity: 10-90%; Altitude conditions: Up to 2,000m</p> <p>With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	210,000.00	210,000.00
27.	<p>LABORATORY EQUIPMENT, Horizontal Mini Cells Electrophoresis System with Basic Power Supply</p> <p>Cell Specifications: base footprint (LxWxH) 25.5x9.2x5.6cm</p> <p>Base: Buffer Volume: 265-320ml Base gel Size: 7x7cm Gel Tray size: 7x10cm</p> <p>Construction: Base: Molded Clear Plastic Gel Casting gates: Aluminum Safety lid: molded Clear Plastic Electrode wire guard: molded polycarbonate Banana Plugs: Gold-Plated Brass, 4.4 cm length Electrodes: Platinum, 0.25mm diameter</p>	1	Unit	260,000.00	260,000.00

	<p>Electrical Cables: Dual, 20 AWG, Tinned copper wire cable Flametretardant polyurethane insulation jacket</p> <p>Electrical leads: Nickle Silver</p> <p>Gel Tray: UV- transparent acrylic plastic (UVTP)</p> <p>Combs: Molded plastic and machine acrylic</p> <p>Gel casting device: Polycarbonate 0.64cm silicon foam basebuffer volumes will vary depending on the size and thickness of the gel used.</p> <p>Basic Power Supply Specifications:</p> <p>Input Power nominal: 220-240 VAC, 50-60 Hz Actual: 90-132or 198-264 VAC, 5 mm x 20 mm, Type T input power cord: 3-wire grounded</p> <p>Output Programmable Voltage: 10V to 300V, fully adjustable in 1V steps Voltage accuracy: 2% of reading of 3 volts, whichever is more Ct: 4 ma to 400ma, Fully adjustable in 1 ma steps power (maximum): 75W Terminals: 4 pair nessed banana jacks, floating in parallel Timer Controller: 001 to 999 minutes fully adjustable Ripple: &lt;1% @ 300V and 70 W Line Regulations: &lt;1% @ 300V and 70 W, 90-132 or 198-264 vac Load regulation: &lt;1% @ 300V for 50% change in output load Drift: &lt;1% @ after 15 mins warm up at 300v and 70w Noise: 55 dBA at 1 Meter readouts stability: Volts !v, current 1 mA</p> <p>SAFETY FEATURES: no load detection: indicated by error message on display</p>				
--	---	--	--	--	--

	<p>Sudden load change detection: indicated by error message on display</p> <p>Overload/short circuit protection: Automatic power limit</p> <p>Input line protection: fuse on both hot and neutral Auto-power up after power failure: user selectable, setup maintained safety compliance: EN-61010</p> <p>EMI: conforms to CE standards for emissions and immunity Class A</p> <p>Display functions: 3 digit LED displays voltage, current or the time</p> <p>Function modes: constant voltage, constant current timer pause User selectable automatic power-up after power failure</p> <p>Environmental Operating Temperature humidity 0-40c</p> <p>Dimensions (LxWxH): 22x21x8.5 cm weight 1.1kg, unit is stable</p> <p>Inclusions:</p> <ol style="list-style-type: none"> <li>1. Gel Caster</li> <li>2. UV-Transparent Plastic (UVTP) Tray, &amp;x 10cm</li> <li>3. 8-well comb, fixed height, 1.5mm thickness</li> <li>4. 15-well comb, fixed height, 1.5mm thickness</li> <li>5. Basic Power Supply</li> </ol> <p>Other Inclusions:</p> <ol style="list-style-type: none"> <li>1. Automated Voltage Regulator, 1kva, 1 unit, or any compatible AVR</li> <li>2. Certified molecular Biology Agarose 25g</li> <li>3. 50x Tris/Acetic ACid/ Edta/ TAe Nucleic acid electrophoresis Buffer</li> <li>4. 100 bp molecular Ruler</li> <li>5. 6x Loading Dye, 1 ml</li> </ol> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
28.	<p>LABORATORY EQUIPMENT, Multiparameter Water Quality Meter Portable Type pH Range -2.000-20.000pH</p> <p>Resolution 0001,0.01,0.1pH</p> <p>Selectable Accuracy: 0.002pH</p> <p>Calibration Points: 1 to 5 points</p>	1	Unit	60,000.00	60,000.00

<p>pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range margin of error plus minus 1999.9mV Resolution 0.1, 1mV, selectable Accuracy margin of error plus minus 0.2mV</p> <p>Calibration Points: 1 point</p> <p>Ion Range: 0.001~19999 (depending on the range of ISE)</p> <p>Resolution: 0.001, 0.01, 0.1, 1</p> <p>Accuracy margin of error <math>\pm 0.5\%</math> F.S. (monovalent), margin of error plus minus 1% F.S. (divalent)</p> <p>Measurement Units ppm, mg/L, mol/L, mmol/L</p> <p>Calibration Points: 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000)</p> <p>Conductivity Range: 0.01~20.00, 200.0, 2000 micro S/cm, 20.00, 200.0mS/cm</p> <p>Resolution: 0.001, 0.01, 0.1, 1</p> <p>Accuracy margin of error: <math>\pm 0.5\%</math> F.S.</p> <p>Calibration Points: 1 to 5 points</p> <p>Calibration Solutions: 10microS/cm, 84microS/cm, 1413microS/cm, 12.88mS/cm, 111.8mS/cm</p> <p>Temperature Coefficient Linear (0.0-10.0%/degree celsius) pure water</p> <p>Reference Temperature 20/25 degree celsius</p> <p>Cell Constant K=0.1, 1, 10 or custom</p> <p>TDS Range: 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt</p> <p>Resolution 0.01, 0.1, 1</p> <p>Accuracy margin of error plus minus 1% F.S.</p> <p>TDS Factor 0.1~1.0 (default 0.5)</p> <p>Salinity Range 0.00~42.00psu, 0.00~80.00ppt</p> <p>Resolution 0.01</p> <p>Accuracy margin of error: <math>\pm 1\%</math> F.S.</p> <p>Resistivity Range 0.00~20.00M?</p> <p>Resolution 0.01 Accuracy margin of error <math>\pm 1\%</math> F.S.</p>				
---	--	--	--	--

	<p>DO Range 0.00~20.00mg/L, 0.0~200.0% saturation Resolution 001mg/L,0.1% Accuracy margin of error <math>\pm</math> 0.2mg/L, margin of error plus minus 2.0% Calibration Points 1 or 2 points With product quality certification or its equivalent With manufacturer's warranty</p>				
29.	<p>LABORATORY EQUIPMENT, PCR (Polymerase Chain Reaction) Machine/Thermal cycler Instrument Classification: Class III Display: Touch Screen Sample Volume: 10-50 <math>\mu</math>l Test measuring range: 4-100 degree celsius</p>	1	Unit	270,000.00	270,000.00
30.	<p>LABORATORY EQUIPMENT, All- in-One Fitness Testing Machine System Assessments include: Biometric Assessments: Blood Pressure, Body Weight, Girth Measurements, Blood Chemistries, Hip-to-Waist Ratio/Body Mass Index, Lung Function Spirometry. Body Composition Assessments: 2, 3 and 7 skinfold sites, Circumference Body Fat Calculation and Bio- Impedance Calculation. Flexibility Protocols: Sit &amp; Reach Test, Trunk and Shoulder Rotation. Cardiovascular Assessments: Bike Ergometer Tests, Treadmill Tests, Adult Field Tests Strength Protocols: Biceps Strength Test, Pushups, Sit-ups, 1- Rep Max Protocols.</p> <p>Features System Computer Interface Unit Integrated, Medical Grade Cart With appropriate/compatible computer hardware and software With all-in-one inkjet Color Printer Interactive Fitness Testing Equipment Skinfold Caliper Wireless Polar Heart Rate System Isometric Strength</p>	1	Unit	400,000.00	400,000.00

	<p>System Modified Sit and Reach Station Body Weight Platform</p> <p>Fitness Assessment and Exercise Planning Software (including President's Challenge and other assessment protocols)</p> <p>Training Videos &amp; Tutorials Reports</p> <p>Student Personal Profile (up to 20 pages) Graphical and Data Summary Trend (compares 6 assessments) Class Lists and Database Query</p> <p>Parent Mail Merge Letters, Labels and Envelopes</p> <p>Available Options</p> <p>Testing Equipment</p> <p>Treadmill, System Interface and Software Autobike, Interactive Testing Bike</p> <p>Resting Blood Pressure and Heart Rate System Lange</p> <p>Skinfold Caliper Upgrade</p> <p>Bioimpedance Scale Software</p> <p>Health Risk Appraisal (includes CDC Youth Risk Behavior Surveys) Meal Planner</p> <p>Group Reporting Template Builder System</p> <p>Network Ready (network hardware, software)</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
31.	<p>LABORATORY EQUIPMENT, Portable Transmittance Spectromata wavelength 380-780 nm; high precision CCD sensor</p>	1	Unit	200,000.00	200,000.00
32.	<p>LABORATORY EQUIPMENT, Rotary Evaporator</p> <p>50-2000mL Evaporation flask value; 1.56 L/H</p> <p>Evaporator Capacity; Manual Lifting; brushless Motor; Rotation speed 20-200RPM; Led display; RT 180 degree Celsius; CE Approved</p>	1	Unit	80,000.00	80,000.00
33.	<p>LABORATORY EQUIPMENT, UV Transilluminator</p>	1	Unit	100,000.00	100,000.00



	Unit dimension (cm) 34 x 29.5 x 10 Viewing Size (cm) 26 x 21 Wave length (nm) 254				
34.	LABORATORY EQUIPMENT, Water Quality Monitoring Kit Can test pH (range: 3 - 10.5), nitrate-nitrogen (0-15 ppm), phosphate (0.2 ppm), dissolved oxygen (0-10 ppm), total alkalinity (0-200 ppm), turbidity (0-200 JTU), and temperature (0-5 to 45 degrees centigrade).	2	Unit	50,000.00	100,000.00
35.	LABORATORY EQUIPMENT, Water Quality Testing Machine Electronic pH tester to 14.0 pH 0.1 pH margin of error $\pm$ 0.1 pH	1	Unit	250,000.00	250,000.00
36.	MONITOR, Patient Monitor Measured parameter: ECG, CO2, NIBP, IBP, SpO2 High-Definition Capacitive Touch Screen weight.: 4.8 kg, size: 310 x289 x169mm USB interface support Multi display mode; Built in high capacity battery up to 2 hours of continuous work; VGA output for continuous display Display screen: Capacitive screen, support multi-touch operation. 12.1-inch, 1280 x 800 pixels; display channel: Up to 10 waveform channels ECG; Led mode, 5 leads SPO2; measuring range 0-100%; Resolution: 1%; Accuracy- 70%- 100%; Pulse rate: 20-250BPM NIBP, Method: Oscillatory; Measure mode: Manual, AUto STAT; UNit: mmHGg, kPa; Auto measure time: Adjustable Measurement range: 10-270mmHg ECG: Lead mode: 3-lead or 5-lead Lead selection: I, II, III, avR, avL, avF, V Heart rate range: Adult: 15-300bpm,	1	Unit	100,000.00	100,000.00

	<p>Pediatric/Neonatal: 15-300bpm  ECG waveform: 2 channels  Accuracy: 1 bpm or 1% S-T segment detection  Measurement range:-0.2mv~2.0mv  Alarm: Yes, audible and visual alarm, alarm events review  PO2:  Measurement range: 0-100%  Accuracy: 70-100%, 2% 0-69%, unspecified  Pulse rate:  Range: 20-254bpm; Accuracy: 3bpm  Respiration:  Method: RA-LL impedance  Range: Adult:0-120rpm; pediatric/neonatal:0-150rpm;  Apnea alarm: Yes  Temperature: Range: 0-50  EtCO2; Measurement Mode: Side-stream or mainstream  Measurement range: EtCO2: 0-99mmHg;  Accuracy: CO2 concentration  Apnea alarm: YES  With accessories; 2 years warranty and after sales service  With product quality certification or its equivalent  With manufacturer's warranty</p>				
37.	<p>MULTIMETER, Water Quality Multi-meter  Parameters Measured: Dissolved Oxygen (%),  Dissolved Oxygen (mg/L), Temperature, Turbidity,  Conductivity, Specific Conductance, Resistivity,  Salinity, Water Density, pH, ORP, Ammonium, Nitrate,  Chloride, Total Dissolved Solids (TDS), Total  Suspended Solids (TSS), Depth, Barometer  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	200,000.00	200,000.00
38.	<p>PH METER, Bench Type pH meter  Automatic calibration with recognition of up to 16 buffers  Automatic temperature compensation</p>	1	Unit	50,000.00	50,000.00

	<p>Electrode check during calibration Stability icon BNC connector for glass-membrane pH electrodes or Redox electrodes</p> <p>STANDARD EQUIPMENT SUPPLIED:</p> <p>Electrode holding arm and base plate pH combination Gel-filling electrode With integrated temperature sensor (3-in-1 ) AC adapter</p> <p>Measuring Range: Voltage: margin of error plus minus 1500.0 mV PH: 0 to + 14.00 Temperature: -5 to + 105 degree celsius Resolution: Voltage : margin of error plus minus 0.1 mV PH: margin of error plus minus 0.01 Temperature: margin of error plus minus 0.1 degree celsius Accuracy: Voltage: margin of error plus minus 0.4 mV pH: margin of error plus minus 0.1 Temperature: margin of error plus minus 0.2 degree celsius With product quality certification or its equivalent With manufacturer's warranty</p>				
39.	<p>SEED MOISTURE METER, Grain Seed Moisture Meter</p> <p>Can test at least 50 types/species of grain or seed High efficiency Digital LCD, Battery input 1.5 AA (Alkaline x4); 50MHz measurement method With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	110,000.00	110,000.00
40.	<p>STIRRER, Hotplate Stirrer with Stir Bar</p> <p>Plate Material - Coated Aluminum/Silicon Glass Plate Dimensions, mm - 150 x 150 Heated Area, mm - 150 x 150 Heater Power, Watt - 700 Max plate temp, degree celsius - 325 Stirrer Speed, rpm - 100 - 2000 Maximum Stirring Capacity, L - 15</p>	1	Unit	70,000.00	70,000.00

	Compatible with SCT1 - Yes Control accuracy with SCT1 - margin of error plus minus 1 degree celsius Dimensions (w x d x h), mm - 172 x 248 x 120 Net weight: 2.5 to 3.5kg Electrical supply – 220V-240V/50-60Hz, 750W IP Rating 32 With product quality certification or its equivalent With manufacturer's warranty				
41.	WATER QUALITY METER, Portable Multi-Parameter Water Quality Analyzer Usage: 1 Weight: 7kg Temperature Range: RT-500 Power Supply: 200	1	Unit	200,000.00	200,000.00

Name of Supplier : \_\_\_\_\_

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

Contact Number : \_\_\_\_\_

**Lot 2: Supply and Delivery of Scientific Equipment, Health/ Biomedical Device for the University (2<sup>nd</sup> Advertisement)**  
**ABC: 7,060,000.00**

Item No.	Particulars	Qty	Unit of Measurement	Unit Cost	Total Cost
1.	<p>LABORATORY EQUIPMENT,  Glass-less infrared heating increases efficiency for faster results</p> <p>Flexible performance: Provides accurate results at either 0.1% or 10 mg readability, and is ideal for textiles, wastewater, ceramics, food and other applications that require IR heating elements and measurements to 0.1%</p> <p>Simple to operate: Set up and operation is extremely easy, just press and hold the temperature or time buttons to set drying parameters, add your sample and begin the test process. This makes the analyzer ideal for routine tasks performed by operators of all skill levels</p> <p>Compact, easy-to-clean design: The compact footprint 6.0-7.0 x 5-6 x 11-12" (15-18 x 12-15x 25 cm-30 cm) of the analyzer is designed to take up less space and the easy-to-clean heating chamber is ideal for frequent use and inexpensive maintenance</p> <p>User-friendly touch-button design for easy operation</p> <p>Compact design suits any workspace</p> <p>Three shut off criteria (manual, timed or auto)</p> <p>One standard heating profile</p>	1	Unit	220,000.00	220,000.00

	<p>40 to 200 degree celsius heating range (4-8 degree celsius increments)</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
2.	<p>LABORATORY EQUIPMENT, Arduino Artificial Intelligence Suite (Dobot Basic AI Kit) DfRduino Mega2560 V3 Specs:</p> <p>Microcontroller: ATmega2560</p> <p>Operating Voltage 5V</p> <p>Input Voltage (recommended): 7V-12V</p> <p>Input Voltage (range): 6V-20V</p> <p>Digital I/O Pins: 54 (of which 15 provide PWM output)</p> <p>Analog Input Pins: 16 I/O</p> <p>DC Current per I/O Pin: 50 mA</p> <p>DC Current for 3.3V Pin: 50 mA</p> <p>Flash Memory: 256 KB of which 4 KB used by the bootloader</p> <p>SRAM: 8 KB</p> <p>EEPROM: 4 KB Clock Speed: 16MHz</p> <p>Pixy CMUcam5 Specs:</p> <p>Processor: NXP LPC330, 204MHz, dual-core</p> <p>Image Sensor: Omni vision OV9715, 1/4", 1280x800 Image Sensor: 75 degrees horizontal, 47 degrees vertical</p> <p>Lens Type: Standard M12 (several different types available)</p> <p>Power Consumption: 140 mA</p> <p>Power Input: USB Input (5V) or unregulated input (6V to 10V)</p> <p>RAM: 264K bytes</p> <p>Flash: 1M bytes</p> <p>Available Data Outputs: UART serial, SPI, I2C, USB, Digital, Analog</p>	1	Unit	425,000.00	425,000.00

	<p>Size: 2.1" × 1.75" × 1.4"</p> <p>Keycap Color: Red, Green, Blue</p> <p>Supply Voltage: 3.3V -5V</p> <p>Data Type Digital Size: 22mm × 30mm</p> <p>LED Module Specs:</p> <p>Color: Red, Green, Blue</p> <p>Brightness: 2500mcd to 3300mcd</p> <p>Highlight Output Voltage: 3.3V - 5V</p> <p>Wavelength: 520nm - 530nm</p> <p>Angle: 80° - 110° Size 30mm × 20mm Weight: 5g</p>				
3.	<p>LABORATORY EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument</p> <p>Heat capacity: About 10500 J / K</p> <p>Oxygen bomb capacity: 300ml</p> <p>Oxygen charging pressure: 2.8 ~ 3.2 MPa</p> <p>Pressure resistance: water pressure 20MPa</p> <p>Weight: 2.5 kg</p> <p>Overall dimension: 650 * 450 * 500 mm</p> <p>Temperature range: 0 ~ 40 °C</p> <p>Response time: &lt; 4 S</p> <p>Resolution: 0.0001 dpi</p> <p>Linearity: &lt; 0.08% per 5 degree celsius temperature rise range</p> <p>Temperature measurement error: ± 0.003 °C for every 5 °C temperature rise range</p> <p>Power supply voltage: AC220V ± 10%</p> <p>Humidity: ≤ 80%</p> <p>Power: 30W</p> <p>Ignition voltage: AC24 V</p> <p>Ignition time: 5S</p> <p>With free training/demo</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	200,000.00	200,000.00

4.	<p>LABORATORY EQUIPMENT, Brake dynamometer Analog/Digital Max Power range: 10-20 hp Max RPM: 2000 rpm Max Torque: 400 Nm With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	250,000.00	250,000.00
5.	<p>LABORATORY EQUIPMENT, Conventional Milling Machine Drilling Capacity: 45mm diameter Face milling Capacity: 80mm diameter End milling Capacity: 32mm diameter Max. Dist. from Spindle nose to table 450mm Min. dist. From spindle axis to column 260mm Spindle travel: 130 mm Spindle speed @ 60Hz 95- 1500RPM Table size: 800x240mm Motor power: 1.5 KW (2HP) Std. Accessories: 1 set of collet, 4 milling vise, clamping kit, 10 pc end mill cutter Features: Gear Driven, Head Swivels 90° vertically, micro feed precision. With DRO (Digital Read Out) With product quality certification or its equivalent With manufacturer's warranty</p>	1	Unit	220,000.00	220,000.00
6.	<p>LABORATORY EQUIPMENT, Diesel engine with common rail intercooler Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp at 4000 RPM Twin overhead camshaft (DOHC) with timing belt</p>	1	Unit	70,000.00	70,000.00



	<p>Vibration-damping balancing shafts</p> <p>Common rail-type direct injection with electro-injectors</p> <p>Turbo-supercharger with air-air intercooler</p> <p>Alternator-oil filter-oil pump</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
7.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Granulation Machine</p> <p>Spec: Automation</p> <p>Grande: Automatic</p> <p>Brand: Generic</p> <p>Die and Roller Size: 6 inches</p> <p>Dimension: 38 x 12 x 26 inch</p> <p>Motor Power: 7.5 HP</p> <p>Output Capacity: 250 kg/hr</p> <p>Pellet Size: 4-10mm;</p> <p>Phase: Single</p> <p>Product Type: Food Pellet Machine</p> <p>Voltage: 220V-240V</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	75,000.00	75,000.00
8.	<p>LABORATORY EQUIPMENT, Feed Pelletizer Machine with Electric Motor</p> <p>Power: 5HP Single Phase</p> <p>Working Load: 80-100 kg/hr</p> <p>Default Disc Mill: 3mm</p> <p>Boundary Dimension: 750 x 280 x 700mm</p> <p>Voltage source: 220V-240V</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	60,000.00	60,000.00
9.	<p>LABORATORY EQUIPMENT, Fiber Optic Splicing Machine</p> <p>AC adaptor: 100-220Vac input voltage, 60 Hz; 12 Vdc, 5A output voltage</p> <p>With Lithium Battery: 11.1V, 5.2Ah</p>	1	Unit	80,000.00	80,000.00

	<p>Applicable to SM, MM, NZ-DS, EDF, Pigtail, FTTH dropcable SC/LC/FC connector</p> <p>Average Splice loss: 0.02dB(SM), 0.01dB(MM), 0.04dB(NZDS), 0.04dB(EDF)</p> <p>Return Loss: <math>\geq</math> to 60dB</p> <p>Splicing time: 8 seconds</p> <p>Heating time: 25 seconds</p> <p>Tension Test: 2.0N</p> <p>Splicing Program: 50 groups</p> <p>Operating Conditions: -10 degree celsius to +50 degree celsius, 0-95% RH, 0-5000m (altitude)</p> <p>LCD Monitor: 5 inches, high resolution</p> <p>Fiber Image Magnification: X or Y separately views with 400 times magnification</p> <p>Storage Result: 6,000 groups of latest splice results</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
10.	<p>LABORATORY EQUIPMENT, FM Transmitter Long Range Broadcast Stereo (4 units)</p> <p>Transmitter: FM</p> <p>Frequency range: FM: 87-108MHz</p> <p>Step frequency: less than or equal to 100Khz</p> <p>Frequency stability: margin of error <math>\pm</math> 10PPM</p> <p>Frequency Stabilization Method: PLL</p> <p>Harmonic Noise: less than or equal to -50dB</p> <p>Output Impedance: 50 ohms</p> <p>Rf output power: up to 15W (8 levels adjustable)</p> <p>Pre-highlight: 75 microseconds</p> <p>Distortion sound: 0.3%</p> <p>Bluetooth distance: about 5 meters</p>	1	Unit	68,000.00	68,000.00

	<p>Frequency response: 50Hz~15000Hz</p> <p>Split: '30dB</p> <p>Frequency adjustment: margin of error <math>\pm</math> 75KHZ</p> <p>Snr: '60 dB</p> <p>Antenna Connector Type: TNC</p> <p>Working temperature: -10-45 degree celsius</p> <p>Transmitter Size: 144x100x59mm</p> <p>Transmitter weight: 545 grams</p> <p>Antenna: Connection Type: TNC</p> <p>Power: 2.15dB</p> <p>Impedance: 50 ohms</p> <p>Maximum stretch length: 1150 mm. (3.77 Feet)</p> <p>Shortest abbreviation length: 210 mm. (0.69 Feet)</p> <p>Feed Length: 5m(16.4ft)</p> <p>Power Supply:</p> <p>Input voltage: 100-240V 50/60Hz</p> <p>Output Power: DC, 12V 3A</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
11.	<p>LABORATORY EQUIPMENT, Heavy duty over locker machine with table</p> <p>1300-1500 max sewing speed 3/4 thread, 4 color easy threading guide 2-4 thread overlocker</p> <p>LED work light</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	2	Unit	60,000.00	120,000.00
12.	<p>LABORATORY EQUIPMENT, Lab Mill/husker</p> <p>Capacity: 250 grams paddy sample</p> <p>Capacity/hr: 50 kg/hr</p> <p>Power: 400 W (0.5 hp) single phase Head power: 1,900 RPM</p> <p>Follow Power: 1,000 RPM Size: 720 x 480 x 1400 mm</p> <p>Weight: 49 kg</p>	1	Unit	100,000.00	100,000.00

	Power source: 220 V, 60 hz With product quality certification or its equivalent With manufacturer's warranty				
13.	<p>LABORATORY EQUIPMENT, LAN Trainer Set: wired and wireless</p> <p>FEATURES PC to PC communication with IEEE 802.3 Wireless LAN-IEEE 802.11 b Token Bus - IEEE 802.4 Network design using RJ45 connectors Error generation Real time graphical representation of entire transmission &amp; reception User friendly software</p> <p>SPECIFICATIONS</p> <p>Hardware PC to PC using RJ-45 Connector Star topology using RJ45 Connector Bus topology using RJ45 Connector Data transmission speed: 10/100 Mbps 4 Nodes</p> <p>Software Bus, Ethernet, Wireless Topology Protocols: Stop N Wait, Go back to N, Selective repeat Packet size: 128, 256, 512, 1024, 2048, 4096, 8192, 16384 Inter Packet delay: 1000-5000 ms Error generation: Acknowledgment lost, bad packet, auto error generation Data encryption &amp; decryption Complete analysis of Network &amp; Protocols Graphic representation of data on s/w screen with packet details</p>	1	Unit	290,000.00	290,000.00

	<p>Network details indication of computer name, IP address, Port number, status of network, MAC address and OS on computer.</p> <p>Indication of packet serial number, file name, file size, file number, receiver name, Workgroup, receiver IP address, total packets, packet length, time out, protocol, topology, receiver, MAC address, port number, file send start time, file sent completion time, transmission time data rate(Mbps), error.</p> <p>Power Supply : 220 V margin of error plus minus 10%, 50 Hz / 60 Hz on request</p> <p>Power Consumption : 1.8 VA (approx.) Evolution of dynamic behavior.</p> <p>Experiments that can be performed</p> <p>Study &amp; implementation of cable designs in networking</p> <p>Implementation of PC to PC with IEEE 802.3</p> <p>Implementation of PC to PC with IEEE 802.11 b</p> <p>Implementation of Bus topology with IEEE 802.4</p> <p>Study of protocols</p> <p>Study of flow control</p> <p>Stop-N-wait</p> <p>Go back to N Selective repeat</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
<p><b>14.</b></p>	<p>LABORATORY EQUIPMENT, Laser Cutting and Engraving Machine</p> <p>Work surface area: at least 1290 x 990 mm</p> <p>Dimension: 1850 x 1500 x 1100 mm or equivalent</p>	<p>1</p>	<p>Unit</p>	<p>1,000,000.00</p>	<p>1,000,000.00</p>

<p>Cutting speed: at least 30000 mm/min</p> <p>Engraving Speed: at least 60000 mm/min</p> <p>Laser Type: CO2 Laser Tube</p> <p>Laser power included: 100 watts</p> <p>Focus lens: 2.0 standard</p> <p>Resolution ratio: 0.025 mm</p> <p>Repositioning accuracy: +/-10%</p> <p>Operating humidity: 5%-80%</p> <p>Graphic format supported: BMP,GIF, JPEG, UNITX, TGA, TIFF, PLT, CDR, DWG, DXF</p> <p>Software compatibility: CorelDraw, Photoshop, AutoCAD, Tajima, CAM/CAD</p> <p>Cooling method: Water cooling(Chiller included)</p> <p>Materials compatibility: Acrylic, Wood, Fabric, Cardboard, Paper, Synthetic Granite, Natural Granite, Leather, Foam board, Glass</p> <p>Extendable size: Front and back of laser machine can be opened suitable for length material process</p> <p>Power requirements: 220V, 50HZ/60HZ Package inclusion:</p> <p>7 unit spare lens</p> <p>8 units spare mirror</p> <p>1 unit rotary</p> <p>1 unit air compressor</p> <p>1 unit chiller</p> <p>Other inclusions:</p> <p>Certificate of distributorship: attached Certificate of Authority to sell issued by the Manufacturer or Philippine Distributor/Reseller.</p> <p>Training Availability: Attached training certificate provided by manufacturer's certified trainer.</p>				
---	--	--	--	--

	<p>Training and Installation: 2 days onsite training and installation for at least 2 personnel</p> <p>Warranty: 12 months warranty for parts and service</p> <p>After Sale Support; Attached After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Attached certification of parts availability issued by the manufacturer for the project.</p> <p>Delivery Lead Time: Onsite delivery, installation, and commissioning and project within location</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
15.	<p>LABORATORY EQUIPMENT, Moisture analyzer (multi-crop)</p> <p>Input voltage: 220V-240V/50-60Hz</p> <p>Weighing capacity [Max]: 200g</p> <p>Weighing units: % Trockenmasse g, % Feuchte</p> <p>Maximum humidity: 80%</p> <p>Maximum operating temperature: 40 degrees Celsius</p> <p>Minimum ambient temperature: 5 degrees Celsius</p> <p>Minimum humidity: 5%</p> <p>Readability (moisture): 0.050%</p> <p>Tare range: 200g</p>	1	unit	97,000.00	97,000.00
16.	<p>LABORATORY EQUIPMENT, ONE SET (ONE BASE AND ONE ROVER)</p> <p>MULTI- FREQUENCY GNSS RECEIVER FOR STATIC, RTK AND PPK APPLICATION</p> <p>APPLICATION: With static, post Processed and real time kinematic.</p> <p>Display: NO DIGITAL DISPLAY</p>	1	Unit	590,000.00	590,000.00

	<p>Satellite Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS</p> <p>ACCURACY: MINIMUM</p> <p>High-Precision Static (RMS)</p> <p>Horizontal 2.5mm+0.1ppm</p> <p>Vertical 3.5mm+0.4ppm Static &amp; Fast Static (RMS)</p> <p>Horizontal 2.5 mm + 0.5 ppm</p> <p>Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS)</p> <p>Horizontal 8 mm + 1 ppm</p> <p>Vertical 15 mm + 1 ppm</p> <p>Post Processed Kinematic (RMS)</p> <p>Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP)</p> <p>Battery operation must be 16hours with two batteries with led light indicator in battery for charge status must be NTC type approved must be a direct distributor (exclusive) software 1. can be installed in android phones, tablet or any android gadgets</p> <p>2. free and downloadable at anytime controller software must have data quality control like configuring only the allowable tolerable error.</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
17.	<p>LABORATORY EQUIPMENT, Petrol Engine, Electronic Fuel Injection (EFI) System Training Equipment 4 cylinders engine, DOHC, 1.3 CC minimum piston displacement, with OBD 2 diagnostic socket, with functional dashboard instrument panel, real and operable engine fuel injection system to illustrate the structure &amp; working process, equipment with intelligent fault setting and appraisal system, include fault setting, troubleshooting &amp; assessment functions, etc., it uses</p>	1	Unit	170,000.00	170,000.00



	<p>ordinary 220 ACV power which will transformed into 12 DCV as power source, has metal base frame, paint coated, with table top attached to the frame, and metal wheel with lock on base of frame for mobility. with manufacturer warranty on parts and labor, with manual of operation (english version) and include training on the use of equipment  With product quality certification or its equivalent  With manufacturer's warranty</p>				
<b>18.</b>	<p>LABORATORY EQUIPMENT, Sheet Metal Box Bending Machine  Manual Box Sheet Bender Width: 1220MM (48?)  Max thickness: 1.5MM Bending Angle: 0-120°  Weight: 95kgs  With product quality certification or its equivalent  With manufacturer's warranty</p>	1	Unit	300,000.00	300,000.00
<b>19.</b>	<p>LABORATORY EQUIPMENT, Single Needle Lock Stitch Machine with Table  Lock stitcher  Direct electronic feed control  Minimum lubrication: Semi-Dry  For medium to heavy materials 5,000-4000 stitches per minute  With product quality certification or its equivalent  With manufacturer's warranty</p>	2	Unit	50,000.00	100,000.00
<b>20.</b>	<p>SHREDDER, Filament Making System  Item: Plastic Shredder  Dimensions: At least 950 × 750 × 1320 mm  Dimensions of top hopper opening: At least 120 x 114 mm  Weight: 85 kg  Voltage: 220V-240V/50-60Hz  Total shredding blades: 14 blades (Combination of 2, 3 and 7 teeth blades are possible)</p>	1	Set	2,300,000.00	2,300,000.00

<p>Frequency: 50 ?</p> <p>Shredder Capacity: Small PET bottle, Medium PET-bottle, PP bottle caps, etc.</p> <p>Certification: CE Certified</p> <p>Features:</p> <p>Smart Control, Material specific settings</p> <p>Can be converted into 2in1 (Shredder and Granulator)</p> <p>Item: Filament Maker</p> <p>Color: Black powder coated aluminum</p> <p>Temp. Peek Point: 450°C</p> <p>Heating Zones: 4? Independent Controllable</p> <p>Swappable Extruder Design: Yes</p> <p>Mixing screw: High-flow screw</p> <p>Extrusion Data Analysis: Real-time</p> <p>Extrusion Direction: Vertical</p> <p>Compatible Materials: PLA, ABS, UNIT, PS, PETG, TPU, TPE, PPS, PVA, Bio PE, NEW PET, PA (6,12, PACKAGE INCLUSION: 66), PEEK, UNIT, PS, PEKK, PAEK, PEI, PSU, PES, PTFE, PVD+, and many more</p> <p>1x Spool</p> <p>1x Pouch PLA - 1200g</p> <p>1x Pouch cleaning 350g</p> <p>1x Spool Holder</p> <p>Other Inclusions:</p> <p>Certificate of Distributorship: Certificate of authority to sell issued by the manufacturer or its Philippine Distributor/Reseller.</p> <p>Training and Installation: 3 days onsite training and installation for at least 5 personnel. Attached training certificate</p> <p>Warranty: 12 months warranty for parts and service.</p>				
--	--	--	--	--

	<p>After Sale Support: After-Sales Support certificate issued by the manufacturer that the supplier has the capability to do after sales support after warranty.</p> <p>Parts availability certificate issued by the manufacturer for the project.</p> <p>Delivery: Onsite delivery, installation, and commissioning at Project Location</p> <p>Delivery Lead Time: 90 Days</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>				
21.	<p>TANK, Argon tank with argon gas</p> <p>Cylinder Type Name: T 330</p> <p>Tank Gas Capacity in Cubic Feet: 335</p> <p>Diameter: 9.2 inches</p> <p>Height: 55 inches</p> <p>Weight: 170 pounds</p> <p>With product quality certification or its equivalent</p> <p>With manufacturer's warranty</p>	1	Unit	325,000.00	325,000.00

Name of Supplier : \_\_\_\_\_

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

Contact Number : \_\_\_\_\_

[Use this form for Framework Agreement:]

# Technical Specifications

<b>TECHNICAL SPECIFICATIONS</b>			
<i>Item / Service</i>	<i>Maximum Quantity</i>	<i>Technical Specifications / Scope of Work</i>	<i>Statement of Compliance</i>
			<p><i>[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 crossreferenced 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 Bidder's 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.]</i></p>

## ***Section VIII. Checklist of Technical and Financial Documents***

### **Notes on the Checklist of Technical and Financial Documents**

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. Any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary “pass/fail” criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class “A” Documents*

#### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages); **or**
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document, **and**
- (c) Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; **and**
- (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

#### Technical Documents

- (e) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (f) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**
- (g) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; **or** Original copy of Notarized Bid Securing Declaration; **and**
- (h) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or aftersales/parts, if applicable; **and**
- (i) Original duly signed Omnibus Sworn Statement (OSS); **and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

#### Financial Documents

- (j) The Supplier’s audited financial statements, showing, among others, the Supplier’s total and current assets and liabilities, stamped “received” by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

- (k) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);  
**or**  
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

***Class "B" Documents***

- (l) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence;  
**or**  
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

**II. FINANCIAL COMPONENT ENVELOPE**

- (m) Original of duly signed and accomplished Financial Bid Form; **and**
- (n) Original of duly signed and accomplished Price Schedule(s).

*Other documentary requirements under RA No. 9184 (as applicable)*

- (o) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- (p) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

# **ANNEX I – BIDDING FORMS**



***Bid Form for the Procurement of Goods***

*[shall be submitted with the Bid]*

**BID FORM**

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

Project Identification No. \_\_\_\_\_:

*To: [name and address of Procuring Entity]*

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to *[supply/deliver/perform]* *[description of the Goods]* in conformity with the said PBDs for the sum of *[total Bid amount in words and figures]* or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties]*, which are itemized herein or in the Price Schedules,

If our Bid is accepted, we undertake:

- a. to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements of the Philippine Bidding Documents (PBDs);
- b. to provide a performance security in the form, amounts, and within the times prescribed in the PBDs;
- c. to abide by the Bid Validity Period specified in the PBDs and it shall remain binding upon us at any time before the expiration of that period.

*[Insert this paragraph if Foreign-Assisted Project with the Development Partner:*

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address	Amount and Purpose of agent
Currency Commission or gratuity	


(if none, state “None”) ]

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of *[name of the bidder]* as evidenced by the attached *[state the written authority]*.

We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

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

Legal capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

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

# ***Bid Securing Declaration Form***

*[shall be submitted with the Bid if bidder opts to provide this form of bid security]*

---

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_) S.S.

## **BID SECURING DECLARATION Project Identification No.: *[Insert number]***

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
  - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_\_ day of *[month]*  
*[year]* at *[place of execution]*.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED  
REPRESENTATIVE]*

*[Insert signatory's legal capacity]*  
Affiant

***[Jurat]***

*[Format shall be based on the latest Rules on Notarial Practice]*

# Omnibus Sworn Statement (Revised)

*[shall be submitted with the Bid]*

---

REPUBLIC OF THE PHILIPPINES ) CITY/MUNICIPALITY OF  
) S.S.

## AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. *[Select one, delete the other:]*

*[If a sole proprietorship:]* I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

*[If a partnership, corporation, cooperative, or joint venture:]* I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. *[Select one, delete the other:]*

*[If a sole proprietorship:]* As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

*[If a partnership, corporation, cooperative, or joint venture:]* I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. *[Select one, delete the rest:]*

*[If a sole proprietorship:]* The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*[If a partnership or cooperative:]* None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*[If a corporation or joint venture:]* None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

- a. Carefully examining all of the Bidding Documents;
- b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
- c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
- d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

**IN WITNESS WHEREOF**, I have hereunto set my hand this day of \_\_, 20\_\_ at \_\_, Philippines.

*[Insert NAME OF BIDDER OR ITS AUTHORIZED  
REPRESENTATIVE]*

*[Insert signatory's legal capacity]*

Affiant

**[Jurat]**

*[Format shall be based on the latest Rules on Notarial Practice]*

***Price Schedule for Goods Offered from Within the Philippines***

*[shall be submitted with the Bid if bidder is offering goods from within the Philippines]*

---

**For Goods Offered from Within the Philippines**

Name of Bidder \_\_\_\_\_ Project ID No. \_\_\_\_\_ Page \_\_\_\_ of \_\_\_\_

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit  (col 5+6+7+8)	Total Price delivered Final Destination  (col 9) x (col 4)

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

Legal Capacity: \_\_\_\_\_

Signature: \_\_\_\_\_

Duly authorized to sign the Bid for and behalf of: \_\_\_\_\_

**STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT SIMILAR TO THE CONTRACT TO BE BID**

This is to certify that           (company)           has the following completed contracts for the period CY 2019-2021. (Note: covering 2 years up to the opening of bids)

Date of the Contract	Contracting Party	Name of Contract	Kind of Goods Sold	Amount of Contract	Date of Delivery/ End-user's Acceptance	Date of Official Receipt	Bidder is	
							A) Manufactu	B) Supplier
							C) Distributor	

\_\_\_\_\_

Name and Signature of

Date

Authorized Representative

\_\_\_\_\_

- \*Instructions:
- a) Cut-off date as of:
    - (i) **Up to the day before the deadline of** submission of bids.
  - b) **In the column under "Dates", indicate the dates of Delivery/ End-user's Acceptance and Official Receipt.**
  - c) **"Name of Contract". Indicate here the Nature/ Scope of the Contract for the Procuring Entity to determine the relevance of the entry with the procurement at hand. Example: "Supply and Delivery of Generator Set"**

**Statement of: (i) Ongoing Contracts and; (ii) Awarded But Not Yet Started Contracts**

This is to certify that \_\_\_\_\_ (company) \_\_\_\_\_ has the following ongoing and awarded but not yet started contracts:

Date of the Contract	Contracting Party	Name of Contract	Kind of Goods Sold	Amount of Contract	Value of Outstanding Contracts	Bidder is A) Manufacturer B) Supplier C) Distributor

Date \_\_\_\_\_  
 Name and Signature of \_\_\_\_\_  
 Authorized Representative

**\*Instructions:**

- a) State all ongoing contracts including those awarded but not yet started (government and private contracts which may be similar or not similar to the project called for bidding) as of:
  - i. **The day before the deadline of** submission of bids.
- b) If there is no ongoing contract including awarded but not yet started as of the aforementioned period, state none or equivalent term.
- c) The total amount of the ongoing and awarded but not yet started contracts should be consistent with those used in the Net Financial Contracting Capacity (NFCC) in case an NFCC is submitted as an eligibility document.
- d) **“Name of Contract”**. Indicate here the Nature/ Scope of the Contract for easier tracking of the entries/ representations. *Example: “Supply and Delivery of Generator Se*



## Contract Agreement Form for the Procurement of Goods (Revised)

[Not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

---

### CONTRACT AGREEMENT

THIS AGREEMENT made the \_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between [name of PROCURING ENTITY] of the Philippines (hereinafter called “the Entity”) of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called “the Supplier”) of the other part;

WHEREAS, the Entity invited Bids for certain goods and ancillary services, particularly [brief description of goods and services] and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of [*contract price in words and figures in specified currency*] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH 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 referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as integral part of this Agreement, *viz.*:
  - i. Philippine Bidding Documents (PBDs);
    - i. Schedule of Requirements;
    - ii. Technical Specifications;
    - iii. General and Special Conditions of Contract; and
    - iv. Supplemental or Bid Bulletins, if any
  - ii. Winning bidder’s bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;  
  
Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;
  - iii. Performance Security;
  - iv. Notice of Award of Contract; and the Bidder’s conforme thereto; and
  - v. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.
4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

*[Insert Name and Signature]*

*[Insert Name and Signature]*

*[Insert Signatory's Legal Capacity]*

*[Insert Signatory's Legal Capacity]*

*for:*

*for:*

*[Insert Procuring Entity]*

*[Insert Name of Supplier]*

#### **Acknowledgment**

*[Format shall be based on the latest Rules on Notarial Practice]*

