

# **PHILIPPINE BIDDING DOCUMENTS**

(As Harmonized with Development Partners)

# Procurement of **GOODS**

Government of the Republic of the Philippines

**(PROCUREMENT OF TECHNICAL AND  
SCIENTIFIC EQUIPMENT FOR THE  
LABORATORIES OF THE CURRICULUM AND  
INSTRUCTION DIVISION/GOODS-2021-03)**

**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.

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## *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

**DEPARTMENT OF SCIENCE AND TECHNOLOGY**

PHILIPPINE SCIENCE HIGH SCHOOL - CALABARZON REGION CAMPUS



Certificate No.: SCP000240Q

## INVITATION TO BID FOR THE PROCUREMENT OF TECHNICAL AND SCIENTIFIC EQUIPMENT FOR THE LABORATORIES OF THE CURRICULUM AND INSTRUCTION DIVISION/GOODS-2021-03

- The Philippine Science High School CALABARZON Region Campus, through the General Appropriations Act 2021 intends to apply the sum of SEVEN MILLION PESOS ONLY (P7,000,000.00) being the ABC to payments under the contract for Procurement of Technical and Scientific Equipment for the Laboratories of the Curriculum and Instruction Division/GOODS-2021-03 consisting of 26 lots. Bids received in excess of the ABC for each lot shall be automatically rejected at bid opening.

Details of the project are as follows:

Lot no.	pc	unit	ITEM DESCRIPTION	ABC (Php)
1	1	unit	Ultrapure water purification system	713,000.00
2	3	lots	Emergency Eyewash and Shower	300,000.00
3	1	unit	Muffle furnace	200,000.00
4	1	unit	Biosafety Cabinet	670,000.00
5	1	unit	Laminar Flow Clean Bench	80,000.00
6	1	Unit	Autoclave (Electric-Heated Vertical Steam Sterilizer), 220V	200,000.00
7	1	Unit	Laboratory Incubator, 220V	165,000.00
8	1	unit	Laboratory Refrigerator & Freezer	50,000.00
9	1	unit	LABORATORY FUME HOOD (Ready-made), Ducted, Single Wall Construction, General Purpose	800,000.00
10	2	unit	Top Loading Balance	60,000.00
11	1	unit	Analytical Balance	100,000.00

<b>12</b>	1	unit	<b>Hot plate magnetic stirrer (digital)</b>	<b>20,000.00</b>
<b>13</b>	1	unit	<b>Centrifuge</b>	<b>25,000.00</b>
<b>14</b>	1	set	<b>Micropipette (100 to 1000 µL)</b>	<b>20,000.00</b>
<b>15</b>	1	set	<b>Drying Oven</b>	<b>140,000.00</b>
<b>16</b>	1	pc	<b>Moisture Analyzer</b>	<b>20,000.00</b>
<b>17</b>	1	unit	<b>Vacuum Sealer Machine</b>	<b>45,000.00</b>
<b>18</b>	2	units	<b>Hydroponic growing pipe system</b>	<b>50,000.00</b>
<b>19</b>	1	lot	<b>Chemical laboratory blower fan with installation</b>	<b>25,000.00</b>
<b>20</b>	1	pc	<b>Sky Quality Meter</b>	<b>17,000.00</b>
<b>21</b>	1	lot	<b>Viscometer</b>	<b>100,000.00</b>
<b>22</b>			<b>Woodcraft and Metal Fabrication Equipments</b>	<b>671,000.00</b>
	3	units	<i>Heavy- Duty Bench Grinder</i>	<i>60,000.00</i>
	1	lot	<i>Radial arm saw</i>	<i>55,000.00</i>
	1	lot	<i>Belt Disc Sander</i>	<i>20,000.00</i>
	1	lot	<i>Table Saw</i>	<i>55,000.00</i>
	1	lot	<i>Router table</i>	<i>40,000.00</i>
	3	lot	<i>Benchtop Drill Press</i>	<i>75,000.00</i>
	1	lot	<i>Circular Saw</i>	<i>16,000.00</i>
	1	lot	<i>Band Saw</i>	<i>65,000.00</i>
	1	lot	<i>Flux Cored Welding Machine</i>	<i>15,000.00</i>
	5	units	<i>Rapid Acting vise</i>	<i>75,000.00</i>
	3	units	<i>Table Vise</i>	<i>45,000.00</i>
	3	units	Benchtop Wood Lathe	150,000.00
<b>23</b>			<b>Rapid Prototyping and Fabrication Lab Equipments</b>	<b>1,757,500.00</b>

	1	lot	Cutter plotter	197,500.00
	1	lot	All in one IDEX Desktop 3D printer	440,000.00
	1	lot	Vacuum Forming Machine	1,120,000.00
<b>24</b>			<b>Sewing Equipments</b>	<b>100,000.00</b>
	1	Lot	High Speed Lockstitch Industrial Sewing Machine	50,000.00
	1	lot	High-Speed Overlock/ Safety stitch Machine	50,000.00
<b>25</b>			<b>Electronics Test Equipments</b>	<b>520,000.00</b>
	4	Units	100MHz Digital Oscilloscope (4 channels standard decoder)	160,000.00
	4	Units	Waveform Function Generator	180,000.00
	4	units	Triple Output Power Supply	180,000.00
<b>26</b>			<b>Spray system and Dust Collection Equipments</b>	<b>151,500.00</b>
	2	Lot	Airbrush Spray Booth	41,500.00
	1	Lot	2HP Dust Collector	110,000.00

The procurement project consists of twenty-six (26) lots and the awarding of contract will be on a per lot basis. Interested bidders are allowed to pursue partial bidding for the procurement of the said lots. Refer to the Terms of Reference for the specifications and requirements for each item/lot.

2. The Philippine Science High School CALABARZON Region Campus now invites bids for the above Procurement Project. Delivery of the Goods is required by one hundred twenty (120) days after issuance of Notice to Proceed. Bidders should have completed, within five (5) 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 non-discretionary “*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 Philippine Science High School CALABARZON Region Campus and inspect the Bidding Documents at the address given below during regular working hours (8:00 am to 5:00 pm).
5. A complete set of Bidding Documents may be acquired by interested Bidders on October 21, 2021 up to before the bid opening on November 10, 2021 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 of the following based on the ABC of each lot:

<b>Approved Budget for the Contract</b>	<b>Maximum Cost of Bidding Documents (in Philippine Peso)</b>
500,000 and below	500.00
More than 500,000 up to 1 Million	1,000.00
More than 1 Million up to 5 Million	5,000.00
More than 5 Million up to 10 Million	10,000.00
More than 10 Million up to 50 Million	25,000.00
More than 50 Million up to 500 Million	50,000.00
More than 500 Million	75,000.00

The Procuring Entity shall allow the bidder to present its proof of payment for the fees *in person*.

6. The Philippine Science High School CALABARZON Region Campus will hold a Pre-Bid Conference<sup>1</sup> on **October 29, 2021, 01:00 PM** at Philippine Science High School CALABARZON Region Campus Sitio Sampaga West, Brgy. Sampaga Batangas City, and through video conferencing or webcasting via Google Meet (<https://meet.google.com/vdo-jcnm-jzh>) which shall be open to prospective bidders.
7. Bids must be duly received by the BAC Secretariat through **manual submission** at the office address indicated below, on or before **November 10, 2021, 01:00 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 **November 10, 2021, 01:05 PM** at the given address below and via Google Meet. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

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<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.

10. The Philippine Science High School CALABARZON Region Campus 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 bidders.
11. For further information, please refer to:

**JOHN VINCENT K. FORTEZA**

*BAC Secretariat*

*Philippine Science High School CALABARZON Region Campus*

*Brgy. Sampaga, Batangas City*

*(043) 724-6199*

*bac@cbzrc.pshs.edu.ph*

*https://cbzrc.pshs.edu.ph/*

You may visit the following websites:

For downloading of Bidding Documents: *https://cbzrc.pshs.edu.ph/*

*Date of Issue: October 21, 2021*



**ABIGAIL M. OCAMPO**

*BAC Chairperson, Goods and Services*

## ***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, *Philippine Science High School CALABARZON Region Campus* wishes to receive Bids for the *Procurement of Technical and Scientific Equipment for the Laboratories of the Curriculum and Instruction Division/GOODS-2021-03*.

The Procurement Project (referred to herein as “Project”) is composed of 26 lots, 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 *FY 2021* in the amount of *Seven Million Pesos only (P7,000,000.00)*.
- 2.2. The source of funding is:
  - a. NGA, the General Appropriations Act or Special Appropriations.

## **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:

- a. Subcontracting is not allowed.

## 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 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 *five years* 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.

## 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)**.

### **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:
  - a. Philippine Pesos.

### **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 *120 days*. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

### **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**.

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

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<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.

- 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.

## **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.
- 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 may be. 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:

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

- 20.2. 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, 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**.

## **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**.

## ***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

ITB Clause																										
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <ol style="list-style-type: none"> <li>a. <i>technical and scientific equipment for laboratories</i></li> <li>b. completed within five years prior to the deadline for the submission and receipt of bids.</li> </ol>																									
7.1	<i>Not applicable</i>																									
12	The price of the Goods shall be quoted DDP <i>Philippine Science High School CALABARZON Region Campus, Sitio Sampaga West, Brgy. Sampaga, Batangas City</i> or the applicable International Commercial Terms (INCOTERMS) for this Project.																									
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> <ol style="list-style-type: none"> <li>a. The amount of not less than <i>P140,000.00</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</li> <li>b. The amount of not less than <i>P350,000.00</i>, if bid security is in Surety Bond.</li> </ol> <p><i>Note: The amounts indicated above are based on the ABC of all the lots. They may vary depending on the ABC of each lot to be bid.</i></p>																									
19.3	<p>The project consists of twenty-six lots identified below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: black; color: white;"> <th style="text-align: center;">Lot no.</th> <th style="text-align: center;">pc</th> <th style="text-align: center;">unit</th> <th style="text-align: center;">ITEM DESCRIPTION</th> <th style="text-align: center;">ABC (Php)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">unit</td> <td><b>Ultrapure water purification system</b></td> <td style="text-align: right;"><b>713,000.00</b></td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">lots</td> <td><b>Emergency Eyewash and Shower</b></td> <td style="text-align: right;"><b>300,000.00</b></td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1</td> <td style="text-align: center;">unit</td> <td><b>Muffle furnace</b></td> <td style="text-align: right;"><b>200,000.00</b></td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">1</td> <td style="text-align: center;">unit</td> <td><b>Biosafety Cabinet</b></td> <td style="text-align: right;"><b>670,000.00</b></td> </tr> </tbody> </table>	Lot no.	pc	unit	ITEM DESCRIPTION	ABC (Php)	1	1	unit	<b>Ultrapure water purification system</b>	<b>713,000.00</b>	2	3	lots	<b>Emergency Eyewash and Shower</b>	<b>300,000.00</b>	3	1	unit	<b>Muffle furnace</b>	<b>200,000.00</b>	4	1	unit	<b>Biosafety Cabinet</b>	<b>670,000.00</b>
Lot no.	pc	unit	ITEM DESCRIPTION	ABC (Php)																						
1	1	unit	<b>Ultrapure water purification system</b>	<b>713,000.00</b>																						
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5	1	unit	Laminar Flow Clean Bench	80,000.00
6	1	Unit	Autoclave (Electric-Heated Vertical Steam Sterilizer), 220V	200,000.00
7	1	Unit	Laboratory Incubator, 220V	165,000.00
8	1	unit	Laboratory Refrigerator & Freezer	50,000.00
9	1	unit	LABORATORY FUME HOOD (Ready-made), Ducted, Single Wall Construction, General Purpose	800,000.00
10	2	unit	Top Loading Balance	60,000.00
11	1	unit	Analytical Balance	100,000.00
12	1	unit	Hot plate magnetic stirrer (digital)	20,000.00
13	1	unit	Centrifuge	25,000.00
14	1	set	Micropipette (100 to 1000 µL)	20,000.00
15	1	set	Drying Oven	140,000.00
16	1	pc	Moisture Analyzer	20,000.00
17	1	unit	Vacuum Sealer Machine	45,000.00
18	2	units	Hydroponic growing pipe system	50,000.00
19	1	lot	Chemical laboratory blower fan with installation	25,000.00
20	1	pc	Sky Quality Meter	17,000.00
21	1	lot	Viscometer	100,000.00
22			Woodcraft and Metal Fabrication Equipments	671,000.00
	3	units	Heavy- Duty Bench Grinder	60,000.00
	1	lot	Radial arm saw	55,000.00
	1	lot	Belt Disc Sander	20,000.00
	1	lot	Table Saw	55,000.00
	1	lot	Router table	40,000.00
	3	lot	Benchtop Drill Press	75,000.00



	1	lot	Circular Saw	16,000.00
	1	lot	Band Saw	65,000.00
	1	lot	Flux Cored Welding Machine	15,000.00
	5	units	Rapid Acting vise	75,000.00
	3	units	Table Vise	45,000.00
	3	units	Benchtop Wood Lathe	150,000.00
<b>23</b>			<b>Rapid Prototyping and Fabrication Lab Equipments</b>	<b>1,757,500.00</b>
	1	lot	Cutter plotter	197,500.00
	1	lot	All in one IDEX Desktop 3D printer	440,000.00
	1	lot	Vacuum Forming Machine	1,120,000.00
<b>24</b>			<b>Sewing Equipments</b>	<b>100,000.00</b>
	1	Lot	High Speed Lockstitch Industrial Sewing Machine	50,000.00
	1	lot	High-Speed Overlock/ Safety stitch Machine	50,000.00
<b>25</b>			<b>Electronics Test Equipments</b>	<b>520,000.00</b>
	4	Units	100MHz Digital Oscilloscope (4 channels standard decoder)	160,000.00
	4	Units	Waveform Function Generator	180,000.00
	4	units	Triple Output Power Supply	180,000.00
<b>26</b>			<b>Spray system and Dust Collection Equipments</b>	<b>151,500.00</b>
	2	Lot	Airbrush Spray Booth	41,500.00
	1	Lot	2HP Dust Collector	110,000.00

*\*Refer to Terms of Reference for the technical specifications of the items in the project.*

20.2	Complete technical and financial components of the bid (One original, two photocopies, and a soft copy scanned and saved in a USB)  Other appropriate licenses, certifications, and permits required during Post Qualification
21.2	<i>No additional requirements</i>

## ***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**.

## 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.

## 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 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**

- 6.1. 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.
- 6.2. 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>“The delivery terms applicable to this Contract are delivered <i>Philippine Science High School CALABARZON Region Campus, Sitio Sampaga West, Brgy. Sampaga, Batangas City</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 <b>Ms. Cladys M. Falcunaya</b>.</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:</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> </ol>

- c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

- e. training of the Procuring 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.

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 *three times the warranty period*.

Spare parts or components shall be supplied as promptly as possible, but in any case, within 2 months of placing the order.

**Packaging –**

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.

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.

The outer packaging must be clearly marked on at least four (4) sides as follows:

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>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	Partial payment is not allowed. Full payment shall be made fifteen working days after delivery of all goods.
4	The inspections and tests that will be conducted are specific to the equipment including but not limited to: accuracy, functionality, and sensitivity.

## *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.

<b>Item Number</b>	<b>Description</b>	<b>Quantity</b>	<b>Total</b>	<b>Delivered, Weeks/Months</b>
1	<b>Ultrapure water purification system</b>	1 unit		
2	<b>Emergency Eyewash and Shower</b>	3 lots		
3	<b>Muffle furnace</b>	1 unit		
4	<b>Biosafety Cabinet</b>	1 unit		
5	<b>Laminar Flow Clean Bench</b>	1 unit		
6	<b>Autoclave (Electric-Heated Vertical Steam Sterilizer), 220V</b>	1 unit		
7	<b>Laboratory Incubator, 220V</b>	1 unit		
8	<b>Laboratory Refrigerator &amp; Freezer</b>	1 unit		
9	<b>LABORATORY FUME HOOD (Ready-made), Ducted, Single Wall Construction, General Purpose</b>	1 unit		
10	<b>Top Loading Balance</b>	2 units		
11	<b>Analytical Balance</b>	1 unit		
12	<b>Hot plate magnetic stirrer (digital)</b>	1 unit		
13	<b>Centrifuge</b>	1 unit		
14	<b>Micropipette (100 to 1000 <math>\mu</math>L)</b>	1 set		
15	<b>Drying Oven</b>	1 set		
16	<b>Moisture Analyzer</b>	1 piece		
17	<b>Vacuum Sealer Machine</b>	1 unit		
18	<b>Hydroponic growing pipe system</b>	2 units		
19	<b>Chemical laboratory blower fan with installation</b>	1 lot		
20	<b>Sky Quality Meter</b>	1 piece		
21	<b>Viscometer</b>	1 lot		
22	<b>Woodcraft and Metal Fabrication Equipments</b>			
	<i>Heavy- Duty Bench Grinder</i>	3 units		
	<i>Radial arm saw</i>	1 lot		
	<i>Belt Disc Sander</i>	1 lot		

	<i>Table Saw</i>	1 lot		
	<i>Router table</i>	1 lot		
	<i>Benchtop Drill Press</i>	3 lots		
	<i>Circular Saw</i>	1 lot		
	<i>Band Saw</i>	1 lot		
	<i>Flux Cored Welding Machine</i>	1 lot		
	<i>Rapid Acting vise</i>	5 units		
	<i>Table Vise</i>	3 units		
	<i>Benchtop Wood Lathe</i>	3 units		
23	<b>Rapid Prototyping and Fabrication Lab Equipments</b>			
	<i>Cutter plotter</i>	1 lot		
	<i>All in one IDEX Desktop 3D printer</i>	1 lot		
	<i>Vacuum Forming Machine</i>	1 lot		
24	<b>Sewing Equipments</b>			
	<i>High Speed Lockstitch Industrial Sewing Machine</i>	1 lot		
	<i>High-Speed Overlock/ Safety stitch Machine</i>	1 lot		
25	<b>Electronics Test Equipments</b>			
	<i>100MHz Digital Oscilloscope (4 channels standard decoder)</i>	4 units		
	<i>Waveform Function Generator</i>	4 units		
	<i>Triple Output Power Supply</i>	4 units		
26	<b>Spray system and Dust Collection Equipments</b>			
	<i>Airbrush Spray Booth</i>	2 lots		
	<i>2HP Dust Collector</i>	1 lot		

## ***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 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>
1	<p><b>Ultrapure water purification system</b></p> <p><i>Specifications:</i> Direct Q5 Water Purification System</p> <p><i>Included:</i></p> <ul style="list-style-type: none"> <li>● Direct Q5 UV</li> <li>● Smartpak Direct - Q5 Purification Pack LT</li> <li>● Express 20 Filter (1/box)</li> <li>● 30 Liter PE Reservoir</li> <li>● PE Tank Filter</li> </ul> <p><i>Accessories included:</i></p> <ul style="list-style-type: none"> <li>● Local Pre-filter</li> </ul> <p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>● Installation</li> </ul>	



	<ul style="list-style-type: none"> <li>● Maintenance Kit</li> <li>● Essential Service Plan (After sales support)</li> <li>● 12 months warranty</li> </ul>	
2	<p><b>Emergency Eyewash and Shower</b></p> <p><i>Specifications:</i> Installation Complete installation Included; stainless steel; conforms with ANSI Z358.1 standard; includes One (1) Head shower and two (2) eyewash heads with SS316 ball Valves for very acidic working environment, water inlet, Flow control and hydraulic pressure; Eyewash heads must be positioned 33” to 45” (Average = 39”) from the floor and 6” from the wall; at least 10” diameter stainless steel bowl.</p> <p><i>Accessories included/Additional Requirements:</i> Included with labor and all materials needed for proper water source, water pressure and drainage in the installation area. Installation area / Location: PSHS – CALABARZONRC SRF and ASTB Chem Stockroom (4th Floor).</p> <p><i>Other Requirements:</i></p> <ul style="list-style-type: none"> <li>● 12 months warranty and after sales support)</li> </ul>	
3	<p><b>Muffle furnace</b></p> <p><i>Specifications:</i></p> <p><i>Muffle Furnace with Programmable Control</i></p> <ul style="list-style-type: none"> <li>● Capacity: 2592 cu in/42.5L</li> <li>● Chamber size (whd): 12x12x18 in</li> <li>● Overall size: 24x28x30 in</li> <li>● Min temp: 100 deg C</li> <li>● Max temp: 1100 deg C</li> <li>● Temp accuracy: +/- 1deg C</li> <li>● Temp uniformity: +/- 4 deg C</li> <li>● Rise time: 45 min to 1100 deg C</li> <li>● Power (VAC): 208/240</li> <li>● Power (Hz): 50/60</li> </ul> <p><i>Accessories included:</i></p>	

	<ul style="list-style-type: none"> <li>● <i>Adaptor/UPS</i></li> </ul> <p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>● <i>Installation and On-site Training</i></li> <li>● <i>Warranty of parts and service</i></li> </ul>	
4	<p><b>Biosafety Cabinet</b></p> <p><i>Specifications: Class II type A2, Internal Working area: width at least 48.0”;; Depth at least 22.0”’, Height at least 26”’. External body is antimicrobial powder coated; stainless and corrosion resistant work tray and sidewalls, filter type is ultra-low particulate air (ULPA) filter, the unit is compliant with NSF/ANSI standards.</i></p> <p><i>Additional Features: With microprocessor controller, with high intensity fluorescent lamp and Low noise emission of the unit, with angled armrest, easy-to-clean working area with drain pan, with spill-containing single-piece work tray with large tray handles.</i></p> <p><i>Accessories included: Wire loop incinerator, Support stand (Fixed, Telescoping, Motorized), Electrical Outlets, UV lamp. Exhaust accessories (Exhaust damper, thimble exhaust collar with alarm, anti – blowback valve, tri – safe exhaust collar with alarm), Footrest, Lab Chair, PVC arm rest and Decontamination Kit.</i></p> <p><i>Additional Requirements: Annual Recertification of the unit whenever HEPA filters are changed, Maintenance repairs are made to internal parts and such as relocation of Cabinet. Hands-on training in operation, maintenance and complete installation with service report on its airflow function, the unit is certified with ISO standards; with at least 2 years warranty service and 1 year for parts, preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer annually for 2</i></p>	

	<p><i>years, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</i></p>	
5	<p><b>Laminar Flow Clean Bench</b></p> <p><i>Specifications:</i></p> <ul style="list-style-type: none"> <li>● <i>Air Cleanliness (ISO 14644): ISO-Class-5</i></li> <li>● <i>Airflow Direction: Horizontal</i></li> <li>● <i>Airflow Velocity 0.3 m/s to 0.5 m/s</i></li> <li>● <i>Casters N/A</i></li> <li>● <i>Closure Panels Optional Rear Closure Panels for Seismic Brackets</i></li> <li>● <i>Construction 16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone</i></li> <li>● <i>Control System AeroMax</i></li> <li>● <i>Cord Pass Through Standard on Right and Left Side Wall</i></li> <li>● <i>Diffuser Metal, non-flammable</i></li> <li>● <i>HEPA Filter Seal Type - HEPEX Zero Leak Neoprene Seal</i></li> <li>● <i>Lighting - Standard Fluorescent with or LED</i></li> <li>● <i>Light Intensity fc (Lux) 90-120 (968-1291)</i></li> <li>● <i>Motor(s) DC ECM</i></li> <li>● <i>Performance Standard ISO-14644-1</i></li> <li>● <i>Plenum Type HEPEX</i></li> <li>● <i>Power Cord Length Foot (Meter) 12 (3.7) or longer</i></li> <li>● <i>Pre-filter : Top of Unit</i></li> <li>● <i>Safety Certification - UL, UL-C</i></li> <li>● <i>Service Couplings (3/8-inch NPT) N/A</i></li> <li>● <i>Service Valves (3/8-inch NPT) Optional up to 3 each sidewall</i></li> <li>● <i>Sidewalls - Standard Stainless Steel, or Polycarbonate</i></li> <li>● <i>Style - bench top</i></li> <li>● <i>Supply Filter: 99.99% Efficiency on 0.3 microns</i></li> <li>● <i>Ultraviolet (UV) Light</i></li> </ul>	

	<ul style="list-style-type: none"> <li>● <i>Work Surface - Standard Stainless Steel with PVC Core</i></li> <li>● <i>Airflow Volume at 90 fpm (0.46 mps): 718 (1220)</i></li> <li>● <i>Heat Rejected (BTU/Hour): 863</i></li> <li>● <i>Height - 30-70"</i></li> <li>● <i>Depth - 36"</i></li> <li>● <i>Width - 30-76"</i></li> <li>● <i>Work Area Depth - 19 5/8 - 22"</i></li> <li>● <i>Work Area Height Inches 26-32"</i></li> <li>● <i>Work Area Width Inches- 34-70"</i></li> <li>● <i>Construction</i> <ul style="list-style-type: none"> <li>○ <i>Motor: 1/3 HP DC ECM</i></li> </ul> </li> <li>● <i>Weight</i> <ul style="list-style-type: none"> <li>○ <i>Net weight: 100-165 kgs</i></li> </ul> </li> </ul> <p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>● <i>Installation and training included</i></li> <li>● <i>Warranty for parts and service</i></li> </ul>	
6	<p><b>Autoclave (Electric-Heated Vertical Steam Sterilizer), 220V</b>  Chamber volume: at least 35L, Working pressure: 0.22MPa, Working temperature: 134°C, Max working pressure: 0.23MPa, Heat average: <math>\leq \pm 1^\circ\text{C}</math>, Timer: 0~99 min/0~99hour59 min, Adjustment temperature: 0~134°C, Power: 2.5KW/AC220V.50Hz, Overall dimension: 600x410x1020mm</p> <p>Additional Features: with door safety lock system, digital display, over temperature and overpressure auto protection, safe protection of water lacking, auto shut off after sterilization, with two (2) stainless steel sterilization baskets</p> <p>Additional requirements: Training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer</p>	

7	<p><b>Laboratory Incubator, 220V</b></p> <p>Volume: at least 32L, Temperature range: Ambient +7.5 °C to 100°C, Temperature Variation Per DIN 12880 Spatial Uniformity at 37°C: &lt;=+/-0.5°C/ at 50°C: &lt;=+/-0.6°C, Temperature Fluctuation Per DIN 12880 Control Fluctuation at 37°C: &lt;=+/-0.3°C/ at 50°C: &lt;=+/-0.3°C, Heating up time at 37°C: 29 minutes/ at 50°C: 36 minutes, Recovery time after door opening for 30 sec at 37°C: 6 minutes/ at 50°C: 8 minutes, Power consumption at 37°C: 43W/ at 50°C: 77W, Maximum power consumption: 919W, Noise level: 48dB, Main body is made from electrogalvanized steel with white oven-baked epoxy-polyester powder-coated finish, Chamber is made from stainless steel, grade 304, Standard number of shelves: 2, Maximum number of shelves: 4, Maximum load per shelf, 15kg, Dimensions: 400 x 250 x 320 mm, Net weight: 45 kg Additional requirements: Training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; 5 years certificate of availability of parts from the manufacturer</p>	
8	<p><b>Laboratory Refrigerator &amp; Freezer</b></p> <p><i>Specifications:</i></p> <p><i>Cabinet type: upright, Cooling Type: forced air cooling, automatic defrost mode, CFC-free, temperature range: 2-8 degree Celsius (Refrigerator), -10 to -25 degree Celsius (Freezer), LED display, with microprocessor controller, electrical data: Power supply: 220-240 V, dimensions: 260L/cu.ft capacity, net/gross weight (approx.) 88-100kg, interior dimensions (WxDxH): at least 550x460x1065mm, exterior dimensions (WxDxH): at least 620x655x1720mm, functions: high/low</i></p>	

	<p><i>temperature, power failure enabled, sensor error, low battery indicator</i></p> <p><i>Accessories included: caster, foot, at least 4 shelves</i></p> <p><i>Additional Requirements:</i> Training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; 5 years certificate of availability of parts from the manufacturer</p>	
9	<p><b>LABORATORY FUME HOOD (Ready-made), Ducted, Single Wall Construction, General Purpose</b></p> <p>Specifications:</p> <p>1.) Fume hood - Internal Working area dimensions is at least 1120 mm (Width) x 682 mm (Depth) x 1435 mm (Height) and External Dimensions not more than 1200 mm (Width) x 873 mm (Depth) x 1500 mm (Height)</p> <p>Features: With front sash constructed of frameless tempered safety glass, Vertical rising fail-safe sash that tilts and locks if a cable snaps. Exhaust volume of at least 1109 cmh or better, Exhaust outlet Diameter of 25cm or larger, with fluorescent light, phenolic resin laminates main body and Interior baffle system, electrogalvanized steel, corrosion and abrasion resistant oven-baked epoxy-polyester powder-coated finish frame, stainless steel grade 304 Airfoil, equipped with a simple rocker switch for lights and fan control. Power supply is at least 220V.</p> <p>2.) Base Cabinet is electrogalvanized steel constructed coated with corrosion resistant coating. External Dimensions is not more than 1200 mm (W) X</p>	

	<p>850mm (D) X 886mm (H). Features/Inclusions:</p> <ol style="list-style-type: none"> <li>2.1) Base Cabinet's tabletop: black phenolic resin top; highly resistant to a wide variety of common acids (With sample presentation), solvents and chemicals, easy to clean and will not corrode,</li> <li>2.2) at least Four (4) electrical socket outlets with splash proof covers,</li> <li>2.3) 1 swan-neck remote control water faucet and 1 standard remote control fitting for gas,</li> <li>2.4) polypropylene(PP) drip cup.</li> <li>2.5) Cabinet doors with lever handles, and</li> <li>2.6) rear access panel for plumbing</li> </ol> <p>Complete installation with Ducting works with supervision of Registered Mechanical Engineer. Ducting works shall be installed in the Science Research Facility (SRF) Chemistry Lab. Ducting with at least 10 inches diameter (or better) PVC pipe attached to the fumehood's duct and at least 12 inches (or better) PVC pipe attached to PVC Tee pipe connected to exhaust blower for exhaust, with air volume damper and exhaust blower, Gooseneck rounded throat exhaust, Proper location and installation of exhaust ductworks for the unit is included depending on the location allotted in the laboratory rooms in PSHS Calabarzon Region Campus - SRF. Included with Piping materials for tapping of water outlet and drainage to the tapping point(s) in the SRF building.</p> <p>Additional requirements/Certifications: Testing of the unit's operation and performance with sticker and report is included in compliance with ANSI/ASHRAE. Updated certificate of training (latest 2 years or better) of service engineer(s) for the application/installation of the unit (certificate shall have name of engineer, name/brand/model of the equipment, date of training, and name of trainer and</p>	
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	<p>the venue of training shall be the manufacturer's address). Hands - on training in operation, maintenance with service report on its function and operation, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</p>	
10	<p><b>Top Loading Balance</b></p> <p><i>Specifications: 220V; at least 4200g capacity; readability is 0.01g; pan diameter is at least 15cm; with RS232 interface data connectivity; certified with ISO9001</i></p> <p><i>Accessories included/Additional Requirements: Installation Included; With at least 2 years warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	
11	<p><b>Analytical Balance</b></p> <p><i>Specifications: Weighing capacity: at least 320 grams; Minimum display: 0.1 mg or 0.0001g or better</i></p> <ul style="list-style-type: none"> <li>• <i>Repeatability: less than 0.15 mg or better</i></li> <li>• <i>Linearity: ± 0.3 mg or better</i></li> <li>• <i>Response reading time: 2 seconds or faster</i></li> <li>• <i>Pan size: at least 90 mm diameter</i></li> <li>• <i>Output terminal: RS232</i></li> </ul> <p><i>Additional Features: Digital display reading, with left, right and top draft shield doors; can fit or weigh 1L Erlenmeyer flask (Height = 21.5cm)</i></p>	



	<p><i>inside the display housing, timer-triggered calibration mode, multi-weight units/ modes/ applications/ piece-counting and with overload protection mechanism.</i></p> <p><i>Additional requirements: Calibration sticker, calibration results and certificate of calibration from accredited ISO:17025 laboratory is included, training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</i></p>	
12	<p><b>Hot plate magnetic stirrer (digital)</b></p> <p><i>Specification: Digital Installation Included; 220V; at least 17cm X 17cm top steel plate, at least 400 o C temperature capacity and 1200rpm stirring speed; with timer; digital read-out</i></p> <p><i>Additional Requirement: Certified with ISO9000; With at least 2 years warranty service, 1year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	
13	<p><b>Centrifuge</b></p> <p><i>Specifications: Installation Included; heavy duty; bench top, general purpose, with complete accessories, 220V; at least with 8 placer; can accommodate at least 7ml to 15ml centrifuge; with timer, safety lock upon opening; with at least 3000 rpm speed</i></p>	

	<p><i>Accessories included/Additional Requirements:</i>  <i>With ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	
14	<p><b>Micropipette (100 to 1000 µL)</b></p> <p><i>Specifications: at least 100µL to 1000µL range; adjustable, highly durable and autoclavable</i></p> <p><i>Accessories included/Additional Requirements:</i>  <i>Installation included; with ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	
15	<p><b>Drying Oven</b></p> <p><b>Specifications:</b>  Volume capacity is at least 32 liters or above; temperature Range is up to 300°C or above; temperature variation and fluctuation is compliant to DIN standards; Heating up time is up to 25 minutes or faster; Main Body is corrosion resistant steel with epoxy powder-coated finish; Chamber is stainless steel; with at least 2 stainless shelves.</p> <p><b>Additional requirements:</b></p> <p>Calibration certificate and sticker from accredited ISO 17025 service provider. Hands - on training in operation, maintenance and complete installation is included with service report on its temperature function and operation in compliance with ISO standard, the unit is</p>	

	<p>certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer annually for 2 years, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</p>	
16	<p><b>Moisture Analyzer</b></p> <p><i>Specifications: Capacity up to 250 grams; digital display, 0.01 g accuracy; dimensions (W 180mm x H 140mm x L 330 mm)</i></p> <p><i>Accessories included: Moisture sample handling accessories, Printer for Moisture Analyzer, Protective Cover, Support Stand, Printer Holder</i></p> <p><i>Additional Requirements: CE Certification</i></p>	
17	<p><b>Vacuum Sealer Machine</b></p> <p><i>Specifications: Vacuuming Speed of 7ℓ/min; Nozzle vacuuming method; approx 4.4 kg; seal Length at least 300 mm / 11.8 in; Seal Width at least 5 mm / 0.19 in; Sealing Time 1 – 9 sec; Vacuuming Time Max. 60 sec; Dimensions W394×D266×H176mm</i></p> <p><i>Accessories included: sample bags (standard, embossed and aluminum vapor deposition bags), heating wires, PTFE Tapes, power cord, nozzle cleaning tool</i></p> <p><i>Additional Requirements: CE Certification</i></p>	
18	<p><b>Hydroponic growing pipe system</b></p> <p><i>Specifications:</i></p> <p><i>Contains prefabricated PVC pipe system (Structure Material : Stainless steel / Hot-</i></p>	

	<p><i>galvanized steel, Structure Dimension : Normally in 600 cm * 90 cm * 300cm , L= 400cm / 600cm or Customized, Channel Material : Food Grade PVC-U Round Channel ( 5 lays / 10 channels), Hole : 8 holes per Channel (2m) in 75 mm matched with 6# / 8# Net Pots or as customized, Parts : Outlet Timer / Pump / Water Tank and Pipe / Net Pots and Foams)</i></p> <p><i>Additional Requirements: Installation &amp; calibration included; with ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	
19	<p><b>Chemical laboratory blower fan with installation</b></p> <p>Installation Included; PVC, polypropylene, or fiberglass reinforced plastic (FRP); acid resistant; to be attached to a cabinet in stockroom; must be suitable to any or all of the following cabinets:</p> <p>a. 46cm X 59cm X 90cm acid cabinets (2units)</p> <p>b. 46cm X 59cm X 90cm acid cabinets (2units)</p> <p>c. 100cm x 50cm X 165cm (4 units solid chemical cabinets)</p>	
20	<p><b>Sky Quality Meter</b>  Technical Specifications:  - Half Width Half Maximum (HWHM) of the angular sensitivity: ~42°  - battery operated  - approximate size: 3.8 x 2.4 x 1 in.  - maximum light sampling time: 80 seconds</p>	
21	<p><b>Viscometer</b>  Technical Specifications:  - digital viscometer  - user interface with keypad control and viewing screen</p>	

	<ul style="list-style-type: none"> <li>- displayed information include viscosity (cP, P, mPa•s or Pa•s) % Torque Speed and Spindle</li> <li>- Torque Measurement Accuracy: ±1.0% of range</li> <li>- Repeatability: ±0.2%</li> <li>- 18 different speeds (0.3 to 100 rpm)</li> <li>- 4-6 spindles</li> <li>- bubble level</li> <li>- spindle guard leg</li> <li>- lab stand</li> <li>- carrying case</li> </ul> <p>Additional requirements: Hands-on training in operation and maintenance. Complete installation and validation of the unit with service report is included. The unit is certified with ISO standards and calibration certificate; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year.</p>	
<b>22</b>	<b>Woodcraft and Metal Fabrication Equipments</b>	
	<p><b>Heavy- Duty Bench Grinder</b> Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Corded electric bench grinder and powered <b>3/4 HP induction motor</b> that provides superior power for industrial grinding applications.</li> <li>● The heavy-duty bench grinder shall have two grinders with a safety guard capable of running <b>at 3,600rpm</b> of removing material in high-speed conditions.</li> <li>● The grinder shall be <b>36 or 60 grit wheels</b> equipped with spark guards, eye shield and tool rests.</li> <li>● Has rear exhaust ports in wheel guard for smoother operation.</li> <li>● Has precision-machined <b>aluminum tool rests</b> that will provide accurate position work.</li> <li>● Characterized by a rugged cast iron base and motor housing of the 8-</li> </ul>	

	<p>inch bench grinder provide durability and prolonged life.</p> <ul style="list-style-type: none"> <li>• Additional requirements: Hands-on training in operation and maintenance. Complete installation and validation of the unit with service report is included.</li> <li>• Can provide 24 months warranty period and After Sales Support certification capable of responding after-sales support after warranty.</li> </ul>	
	<p><b>Radial arm saw</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Oversized, highly visible bevel scale with positive stops.</li> <li>• Has a tall sliding fence supports a 6-3/4-inch base vertically.</li> <li>• Made up of stainless-steel miter detent plate of the 12-inch miter saw blade comes with 10 positive stops.</li> <li>• The miter saw has a precise miter system and machine base fence support. Can be beveled from 0-48 degrees left and right.</li> <li>• Has dual horizontal steel rails feature that allows innovative clamping mechanism and linear ball bearings for accuracy and durability.</li> <li>• The radial arm saw shall be efficient in a dust collection system that can capture at least 75% of the dust generated.</li> <li>• Can provide 12 months warranty period and 5-year certificate of availability of parts from the manufacturer</li> </ul>	
	<p><b>Belt Disc Sander</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Capable of running 3,600rpm with a 4.3-amp 1/2 HP motor or any equivalent.</li> <li>• Can be easily sand, smooth, and removes jagged edges and splinters on wood.</li> <li>• Features: 4 x 36in belt and 6 inches Disc sander with cast iron base. 80-</li> </ul>	

	<p>grit sanding belt and the sanding disc. The equipment shall have at least a dust port, miter gauge, and a beveling work table.</p> <ul style="list-style-type: none"> <li>● The sander belt can be tilted anywhere from 0 to 90 degrees to accommodate the need of the workpiece.</li> <li>● The sanding disc shall include a sturdy cast-aluminum work table</li> <li>● Additional requirements: Complete installation and validation of the unit with service report is included.</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Table Saw</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Capable of ripping 4x8 sheet plywood and offers convenience/ease in adjustments of rack and pinion telescoping of fence rails.</li> <li>● Operates at 15-amp power supply at 5,800rpm motor or equivalent.</li> <li>● Features: table saw, table saw fence, has an anti-kickback pawl, a miter gauge, push stick, non-thru cut riving knife, blade change wrenches, modular guard system, and 24T 8-1/4 in. blade</li> <li>● 8-1/4 inch Saw with guard</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Router table</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Benchtop router table design that features a large aluminum top for extended work area.</li> <li>● Has rigid aluminum mounting plate for table height adjustment operation.</li> <li>● Has adjustable faceplates and feather boards to maximize precision. Easy to use/ adjust</li> </ul>	

	<p>feather boards but provides maximum kickback protection.</p> <ul style="list-style-type: none"> <li>● Allow connecting 2-1/2-inch vacuum hose for dust collection mechanism.</li> <li>● Features: has miter gauge, storage pockets, cord wrap storage, two outfeed shims, and an aluminum router mounting plate.</li> <li>● Accessories and maintenance tools shall be provided by the supplier for the convenience of adjusting table height.</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Benchtop Drill Press</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Has oversized ergonomic knobs for maximum control.</li> <li>● Has retractable roller extension that provides support and quick workpiece adjustments.</li> <li>● Has a large paddle switch that will provide easy shut-off and lockout protection.</li> <li>● Corded electric and operates at 115 V or higher with at least 3,100rpm (1/2 HP induction motor) for the speed of the motor.</li> <li>● Allow connecting 2-1/2-inch vacuum hose for dust collection mechanism.</li> <li>● Features: table tilt at 90 degrees, oscillating spindle at 3/4 inch, has table dust port,</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Circular Saw</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Includes a 7 -1/4 circular saw operated with an electric brake that stops the blade after the trigger is released.</li> </ul>	



	<ul style="list-style-type: none"> <li>● Operates at least a 15-amp motor of the compact circular saw delivers power at 5,200 rpm and produces a cut capacity of 2 9/16-inch depth.</li> <li>● Has durable high-grade Aluminum smooth base for accurate cuts. The circular saw shall also have the capability of beveling 57 degrees with stop features at 45 degrees and 22.5 degrees.</li> <li>● Has a vacuum adaptor for convenience of cleaning.</li> <li>● The circular saw has to be lightweight for convenience in tooling and offers a safety lock-off feature to avoid an accident.</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Band Saw</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● 1HP bandsaw that can be used in a 110V/220V power source. Operates at 1,725rpm and 14amps.</li> <li>● Blade size: 93-1/2 inch (1/8-inch to 3/4 inch wide). Cutting capacity needs to be at least 13-1/2 inches at a vertical height of 6-inch.</li> <li>● The item has a bed table with at least 14-inch x 14-inch x 1-1/2-inch dimension and can be tilted 45degrees right, and 10 degrees left.</li> <li>● The item shall be made of cast iron blade wheels, frame, and table</li> <li>● The circular saw has to be lightweight for convenience in tooling and offers a safety lock-off feature to avoid an accident.</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	
	<p><b>Flux Cored Welding Machine</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● The supplier shall provide a portable and lightweight welding</li> </ul>	

	<p>machine that uses insulated gate bipolar transistor technology.</p> <ul style="list-style-type: none"> <li>● The supplier shall provide a 200A welding machine with MIG/ARC/LIFT TIG gas gasless multi-function 220V DC inverter welder.</li> <li>● Available to a wide range of thicknesses for flux-cored wire</li> <li>● The supplier shall provide 1kg 0.8-1.0 mm solid wire with gas welding iron including 0.8-1.0mm flux-cored wire without gas welding carbon steel and stainless steel.</li> <li>● The machine shall be equipped with an MB15 MIG gun, earth clamp, electrode holder, gas tube, 1kg 1.0/0.8mm flux-cored wire, and portable plug.</li> <li>● Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> <li>● Inclusion of basic training from a certified local trainer and can provide a training certificate from the reputable manufacturer.</li> </ul>	
	<p><b>Rapid Acting vise</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● It should be heavy-duty cast iron with dimensions similar to or near 18.79 x 8.63 x 7.76inches. It shall be fit to a 3.5” thick workbench.</li> <li>● 30,000 PSI cast iron construction, blue powder coat finish.</li> <li>● The vise has a quick release level that allows rapid opening and closing of the vise.</li> <li>● Engineered for optimal safety following dimensions like 9” jaw width, jaw opening 10”, throat depth 4.06”.</li> <li>● The supplier shall/can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>	

	<p><b>Table Vise</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● It should be heavy-duty cast iron with dimensions nearly 11 x 11 x 7.5 inches.</li> <li>● 30,000 PSI cast iron construction, blue powder coat finish.</li> <li>● Can hold 0.6” dia to 1.85” dia pipes and tubes.</li> <li>● Anvil: 1.75” x 2”</li> <li>● Screw diameter: 0.6” (1.5cm), handle diameter: 0.4” (91cm) x Handle length 6” (15.2cm)</li> <li>● Capable of 240-degree swivel base rotating the vise for versatility.</li> <li>● The supplier shall/can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>	
	<p><b>Benchtop Wood Lathe</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● The wood lathe shall be made of cast iron and designed to fit neatly on a workbench.</li> <li>● The item shall be 1/3 horsepower, with a variable speed motor that allows spindle speed between 700 – 3,200rpm. The item will be plugged in a single-phase, 60Hz power source at 220V AC.</li> <li>● 8-inch swing over bed and includes two tool rests.</li> <li>● Other Features: has a safety paddle switch, 4-1/4 inch and 7-inch tool rest, a 5-3/4 inch faceplate, 3/4-by-16 inch TPI RH spindle, an MT No. 1 live center, and an MT No. 1 spur center.</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding after-sales support after warranty.</li> </ul>	

	<ul style="list-style-type: none"> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
23	<b>Rapid Prototyping and Fabrication Lab Equipments</b>	
	<p><b>Cutter plotter</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Grit rolling type with a maximum cutting area of 603mm x 50m.</li> <li>● Graphic type LCD with backlight display (240x128 dots). Machine Design with an external dimension of 900 x 593 x 1046mm</li> <li>● Can be operated by 200-240V AC (Auto switch), 50/60Hz</li> <li>● Operate at a maximum cutting speed of 900mm/s.</li> <li>● Comprise of 2 push rollers and a Supersteel blade that can be operated at a maximum acceleration of 21.2m/s</li> <li>● Inclusion of windows driver, dedicated software for the machine, and plotter controller</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>	
	<p><b>All in one IDEX Desktop 3D printer</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Design utilizing Fused Deposition Modeling (FDM) technology with precise positioning resolution at 0.78125 micron on x/y axis.</li> <li>● Independent Dual Extruder print head system</li> <li>● Capable of WiFi, LAN, USB Port, USB Drive connectivity</li> <li>● Fully enclosed 3D printer chamber with Aluminum build plate capable</li> </ul>	

	<p>of flatness detection through its mesh leveling and magnetic holding feature.</p> <ul style="list-style-type: none"> <li>● Maximum build volume of 330x240x240mm and has auto resume print functionality</li> <li>● Inclusion of 1 set of 3D printer Kit and at least 2x 1kg filament spool</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
	<p><b>Vacuum Forming Machine</b>  Technical Specification:</p> <ul style="list-style-type: none"> <li>● Vacuum forming machine with a forming area of 430 x 280mm and up to 160mm depth of draw.</li> <li>● Composed of 4 heating zones utilizing Quartz as heater type.</li> <li>● Sheet size: 450 x 300mm</li> <li>● Offers package inclusion of vacuum forming machine accessories like 1 unit of a trolley and at least 1 set starter pack of plastics.</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding after sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
24	<b>Sewing Equipments</b>	

	<p><b>High Speed Lockstitch Industrial Sewing Machine</b></p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>● The supplier shall provide a lockstitch sewing machine with an automatic thread trimmer.</li> <li>● The item shall have a control box and operation panel integrated with the machine head.</li> <li>● Direct drive sewing machine that only utilizes 1 thread and operates at 220V AC</li> <li>● The item shall provide LED lighting to the fabric sewn. This shall also</li> <li>● Has a highly functional touch-back switch.</li> <li>● The high-speed sewing machine shall allow DBx 1(#14) or #14-#18 needle.</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding after sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
	<p><b>High-Speed Overlock/ Safety stitch Machine</b></p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Offers advanced overlock mechanism that has safety switches easier to use and cost-effective.</li> <li>● Can be operated at a maximum speed of 7,000 sti/min with a stitch length of 0.6 to 3.8mm</li> <li>● Overedging width: 1.5 - 6.0mm</li> <li>● Needle bar stroke can accommodate 24.5mm and needle inclination set at 20-degree angle.</li> <li>● Maximum presser foot pressure: 63.7N</li> <li>● Needle: DCx27</li> </ul>	

	<ul style="list-style-type: none"> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
25	<b>Electronics Test Equipments</b>	
	<p><b>100MHz Digital Oscilloscope (4 channels standard decoder)</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● The supplier shall provide an oscilloscope that has SPO (Super-Phosphor-Oscilloscope) technology.</li> <li>● Has a minimum vertical input range of 500 uV/divan innovative digital trigger system with high sensitivity and low jitter.</li> <li>● Capable of documenting Waveform capture rate at 400,000 frames/sec.</li> <li>● Has 256- level intensity grading display feature including color temperature display.</li> <li>● Serial bus decoding for IIC, SPI, UART, CAN, LIN bus types shall be included. MSO capable.</li> <li>● Has an embedded application that allows remote control via a web browser.</li> <li>● Capable of searching and navigating, on-screen Bode plot, 16 digital channels. Has an external powered 25 MHz AWG module (Option) and a USB WiFi Adapter (option).</li> <li>● Inclusion of 100Mhz Oscilloscope clip probes with an accessory kit and BNC to minigrabber test lead set.</li> </ul>	

	<ul style="list-style-type: none"> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
	<p><b>Waveform Function Generator</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● Dual-channel 40MHz (sine wave) with touch screen display. Has USB/ LAN interface.</li> <li>● Capable of 16-bit vertical resolution with a built-in high precision frequency counter.</li> <li>● Inclusion of license software for editing arbitrary waveforms.</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
	<p><b>Triple Output Power Supply</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● 3 independent controlled and isolated outputs. Capable of independent, series, and parallel configurations. Compatible with a 100-230V power source.</li> <li>● USB/ LAN interfaces and have timing functions. At least 4.3-inch True color TFT LCD 480x272 display.</li> <li>● 5-digit Voltage/ 4-digit current display at a minimum resolution of 1mV/ 1mA.</li> </ul>	



	<ul style="list-style-type: none"> <li>● Has timing output function and trending graphs. Allows the user to measure accuracy using the following setup: 32V/3.2A, 2.5V/3.3V/5V/3.2A x 1. Total power: 220W.</li> <li>● Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>● Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	
<b>26</b>	<b>Spray system and Dust Collection Equipments</b>	
	<p><b>Airbrush Spray Booth</b>  Technical Specifications:</p> <ul style="list-style-type: none"> <li>● The item has at least 3 LED lights (12w at 2340LM luminous flux) capable of operating at 220-240V 50/60Hz power supply.</li> <li>● Portable and can be easily folded into a suitcase for carrying or storing.</li> <li>● Has a flexible exhaust extension hose up to 67-inches. Has a revolving turntable to reach all the areas to be painted.</li> <li>● Dimension should not be less than 18.19 x 13.46 x 10.53 inches.</li> <li>● Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>● Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	

## **2HP Dust Collector**

### Technical Specifications:

- 2HP Dust collector capable of making efficient air movement while plugged at 220-240V AC supply.
- The item needs to be enclosed, fan-cooled motors, and quick-connect collection bags with an elastic band.
- Inclusion of see-through dust bags, 2-micron canister kit, Flexible clear view heavy duty PVC hose (4"x20 feet), and hose cone reducer (4-inch hose to 2-1/2)
- Has ergonomic knobs that are easy to handle and four heavy-duty casters for ease in mobility.
- Uses the Vortex Cone technology that eliminates filter clogging and strengthens performance quality.
- Dimension should not be less than 37.5 x 22.5 x 39 inches.
- Can provide a 5 years warranty period and After Sales Support certification capable of responding to after-sales support after warranty.
- Can provide certification of parts availability issued by the manufacturer for the project.

## ***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); **and**
- (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

- (f) 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**
- (g) 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**
- (h) 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**
- (i) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; Schedule of Requirements; **and**
- (j) 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

- (k) 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**
- (l) 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***

- (m) 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.

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

- (n) *[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.
- (o) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

**25 FINANCIAL COMPONENT ENVELOPE**

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





## **TERMS OF REFERENCE FOR THE PROCUREMENT OF TECHNICAL AND SCIENTIFIC EQUIPMENT FOR THE LABORATORIES OF THE CURRICULUM AND INSTRUCTION DIVISION**

### **I. Background**

The Philippine Science High School is mandated by the government to provide secondary education with emphasis on science and technology with the aim of preparing its students for STEM-related careers. The curriculum was designed to equip students with the knowledge, skills, and attitudes that are deemed to be essential in preparing for a STEM-related career. This aim is realized when instruction is aided with appropriate supplies and equipment.

### **II. Rationale**

Technical and scientific equipment in scientific research offers a range of testing instruments and measuring equipment for various research projects and experiments related to Integrated Science, Chemistry, Biology, Physics and Research. Since Philippine Science High School are bound to prepare and develop the scientific skills of the scholars to be globally competitive, the school should expose them to highly technical equipment and instructional materials that gives them the opportunity to experience actual operation of various equipment and gather accurate and reliable test results. By providing the students with enough equipment needed in their laboratory experiments, their subject teachers may easily emphasize the different principles in their subject matter particularly in the field of science. However, some of the necessary equipment needed for various experiments is not yet available in the science laboratory. Hence, equipment being requested will be very helpful for innovative technology in the research science laboratory.

### **III. Scope of Work and Job Specifications**

Awarding of the contract shall be per lot. The supplier should be able to provide all listed technical and scientific equipment following the specifications, certifications and unit demonstration if necessary (See Enclosure No. 1). Also, after installation of fume hood and emergency shower with eyewash, service providers should complete building restoration and paint works in accordance with existing color and structure of the building. Ocular visit in the respective building is included for proper and complete installation and/or assembly of all units.

### **IV. Approved Budget for the Contract**

The approved budget for the contract is **SEVEN MILLION PESOS (Php 7,000,000.00)**

### **V. Evaluation and Selection Criteria**

Proposal with the lowest calculated bid with complete documents shall be accepted.



Republic of the Philippines

**DEPARTMENT OF SCIENCE AND TECHNOLOGY**

PHILIPPINE SCIENCE HIGH SCHOOL - CALABARZON REGION CAMPUS



Certificate No.: SCP000240Q

## **VI. Payment Scheme**

Payment for the procured items shall be made 15 working days from the day the said items are delivered to the procuring entity.

## **VII. Delivery Term**

All technical and scientific equipment awarded must be delivered and completely installed **one hundred twenty (120) days after** issuance of Notice to Proceed.





Enclosure No. 1

**TERMS OF REFERENCE FOR THE PROCUREMENT OF TECHNICAL AND SCIENTIFIC EQUIPMENT FOR THE RESEARCH LABORATORIES, FOODS LABORATORY, GREENHOUSE, ANIMAL HOUSE OF SCIENCE RESEARCH FACILITY, AND FABRICATION LABORATORY**

Lot no.	pc	unit	ITEM DESCRIPTION	Proposed Unit Price	Proposed Total
1	1	unit	<p><b>Ultrapure water purification system</b></p> <p><i>Specifications:</i> Direct Q5 Water Purification System  <i>Included:</i></p> <ul style="list-style-type: none"> <li>• Direct Q5 UV</li> <li>• Smartpak Direct - Q5 Purification Pack LT</li> <li>• Express 20 Filter (1/box)</li> <li>• 30 Liter PE Reservoir</li> <li>• PE Tank Filter</li> </ul> <p><i>Accessories included:</i></p> <ul style="list-style-type: none"> <li>• Local Pre-filter</li> </ul> <p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>• Installation</li> <li>• Maintenance Kit</li> <li>• Essential Service Plan (After sales support)</li> <li>• 12 months warranty</li> </ul>	713,000.00	713,000.00



2	3	lots	<p><b>Emergency Eyewash and Shower</b></p> <p><i>Specifications:</i> Installation Complete installation Included; stainless steel; conforms with ANSI Z358.1 standard; includes One (1) Head shower and two (2) eyewash heads with SS316 ball Valves for very acidic working environment, water inlet, Flow control and hydraulic pressure; Eyewash heads must be positioned 33" to 45" (Average = 39") from the floor and 6" from the wall; at least 10" diameter stainless steel bowl.</p> <p><i>Accessories included/Additional Requirements:</i> Included with labor and all materials needed for proper water source, water pressure and drainage in the installation area. Installation area / Location: PSHS – CALABARZONRC SRF and ASTB Chem Stockroom (4th Floor).</p> <p><i>Other Requirements:</i></p> <ul style="list-style-type: none"> <li>● 12 months warranty and after sales support)</li> </ul>	100,000.00	300,000.00
3	1	unit	<p><b>Muffle furnace</b></p> <p><i>Specifications:</i></p> <p><i>Muffle Furnace with Programmable Control</i></p> <ul style="list-style-type: none"> <li>● Capacity: 2592 cu in/42.5L</li> <li>● Chamber size (whd): 12x12x18 in</li> <li>● Overall size: 24x28x30 in</li> <li>● Min temp: 100 deg C</li> <li>● Max temp: 1100 deg C</li> <li>● Temp accuracy: +/- 1deg C</li> <li>● Temp uniformity: +/- 4 deg C</li> <li>● Rise time: 45 min to 1100 deg C</li> <li>● Power (VAC): 208/240</li> <li>● Power (Hz): 50/60</li> </ul> <p><i>Accessories included:</i></p> <ul style="list-style-type: none"> <li>● Adaptor/UPS</li> </ul>	200,000.00	200,000.00



			<p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>• <i>Installation and On-site Training</i></li> <li>• <i>Warranty of parts and service</i></li> </ul>		
4	1	unit	<p><b>Biosafety Cabinet</b></p> <p><i>Specifications: Class II type A2, Internal Working area: width at least 48.0" ; Depth at least 22.0", Height at least 26" ; External body is antimicrobial powder coated; stainless and corrosion resistant work tray and sidewalls, filter type is ultra-low particulate air (ULPA) filter, the unit is compliant with NSF/ANSI standards.</i></p> <p><i>Additional Features: With microprocessor controller, with high intensity fluorescent lamp and Low noise emission of the unit, with angled armrest, easy-to-clean working area with drain pan, with spill-containing single-piece work tray with large tray handles.</i></p> <p><i>Accessories included: Wire loop incinerator, Support stand (Fixed, Telescoping, Motorized), Electrical Outlets, UV lamp. Exhaust accessories (Exhaust damper, thimble exhaust collar with alarm, anti – blowback valve, tri – safe exhaust collar with alarm), Footrest, Lab Chair, PVC arm rest and Decontamination Kit.</i></p> <p><i>Additional Requirements: Annual Recertification of the unit whenever HEPA filters are changed, Maintenance repairs are made to internal parts and such as relocation of Cabinet. Hands-on training in operation, maintenance and complete installation with service report on its airflow function, the unit is certified with ISO standards; with at least 2 years warranty service and 1 year for parts, preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer annually for 2 years, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</i></p>	670,000.00	670,000.00



5	1	unit	<p><b>Laminar Flow Clean Bench</b></p> <p><i>Specifications:</i></p> <ul style="list-style-type: none"> <li>• <i>Air Cleanliness (ISO 14644): ISO-Class-5</i></li> <li>• <i>Airflow Direction: Horizontal</i></li> <li>• <i>Airflow Velocity 0.3 m/s to 0.5 m/s</i></li> <li>• <i>Casters N/A</i></li> <li>• <i>Closure Panels Optional Rear Closure Panels for Seismic Brackets</i></li> <li>• <i>Construction 16/18 GA, powder coated steel exterior; 16/18 GA type 304 SST work zone</i></li> <li>• <i>Control System AeroMax</i></li> <li>• <i>Cord Pass Through Standard on Right and Left Side Wall</i></li> <li>• <i>Diffuser Metal, non-flammable</i></li> <li>• <i>HEPA Filter Seal Type - HEPEX Zero Leak Neoprene Seal</i></li> <li>• <i>Lighting - Standard Fluorescent with or LED</i></li> <li>• <i>Light Intensity fc (Lux) 90-120 (968-1291)</i></li> <li>• <i>Motor(s) DC ECM</i></li> <li>• <i>Performance Standard ISO-14644-1</i></li> <li>• <i>Plenum Type HEPEX</i></li> <li>• <i>Power Cord Length Foot (Meter) 12 (3.7) or longer</i></li> <li>• <i>Pre-filter : Top of Unit</i></li> <li>• <i>Safety Certification - UL, UL-C</i></li> <li>• <i>Service Couplings (3/8-inch NPT) N/A</i></li> <li>• <i>Service Valves (3/8-inch NPT) Optional up to 3 each sidewall</i></li> <li>• <i>Sidewalls - Standard Stainless Steel, or Polycarbonate</i></li> <li>• <i>Style - bench top</i></li> <li>• <i>Supply Filter: 99.99% Efficiency on 0.3 microns</i></li> <li>• <i>Ultraviolet (UV) Light</i></li> <li>• <i>Work Surface - Standard Stainless Steel with PVC Core</i></li> <li>• <i>Airflow Volume at 90 fpm (0.46 mps): 718 (1220)</i></li> <li>• <i>Heat Rejected (BTU/Hour): 863</i></li> <li>• <i>Height - 30-70"</i></li> <li>• <i>Depth - 36"</i></li> </ul>	80,000.00	80,000.00
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			<ul style="list-style-type: none"> <li>• <i>Width - 30-76"</i></li> <li>• <i>Work Area Depth - 19 5/8 - 22"</i></li> <li>• <i>Work Area Height Inches 26-32"</i></li> <li>• <i>Work Area Width Inches- 34-70"</i></li> <li>• <i>Construction</i> <ul style="list-style-type: none"> <li>◦ <i>Motor: 1/3 HP DC ECM</i></li> </ul> </li> <li>• <i>Weight</i> <ul style="list-style-type: none"> <li>◦ <i>Net weight: 100-165 kgs</i></li> </ul> </li> </ul> <p><i>Additional Requirements:</i></p> <ul style="list-style-type: none"> <li>• <i>Installation and training included</i></li> <li>• <i>Warranty for parts and service</i></li> </ul>		
6	1	unit	<p><b>Autoclave (Electric-Heated Vertical Steam Sterilizer), 220V</b>            Chamber volume: at least 35L, Working pressure: 0.22MPa, Working temperature: 134°C, Max working pressure: 0.23MPa, Heat average: <math>\leq \pm 1^\circ\text{C}</math>, Timer: 0~99 min/ 0~99hour59 min, Adjustment temperature: 0~134°C, Power: 2.5KW/AC220V.50Hz, Overall dimension: 600x410x1020mm</p> <p>Additional Features: with door safety lock system, digital display, over temperature and overpressure auto protection, safe protection of water lacking, auto shut off after sterilization, with two (2) stainless steel sterilization baskets            Additional requirements: Training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer</p>	200,000.00	200,000.00
7	1	unit	<p><b>Laboratory Incubator, 220V</b>            Volume: at least 32L, Temperature range: Ambient <math>+7.5^\circ\text{C}</math> to <math>100^\circ\text{C}</math>, Temperature Variation Per DIN 12880 Spatial Uniformity at <math>37^\circ\text{C}</math>: <math>\leq \pm 0.5^\circ\text{C}</math>/ at <math>50^\circ\text{C}</math>: <math>\leq \pm 0.6^\circ\text{C}</math>, Temperature Fluctuation Per DIN 12880 Control</p>	165,000.00	165,000.00



			<p>Fluctuation at 37°C: <math>\leq \pm 0.3^\circ\text{C}</math>/ at 50°C: <math>\leq \pm 0.3^\circ\text{C}</math>, Heating up time at 37°C: 29 minutes/ at 50°C: 36 minutes, Recovery time after door opening for 30 sec at 37°C: 6 minutes/ at 50°C: 8 minutes, Power consumption at 37°C: 43W/ at 50°C: 77W, Maximum power consumption: 919W, Noise level: 48dB, Main body is made from electrogalvanized steel with white oven-baked epoxy-polyester powder-coated finish, Chamber is made from stainless steel, grade 304, Standard number of shelves: 2, Maximum number of shelves: 4, Maximum load per shelf, 15kg, Dimensions: 400 x 250 x 320 mm, Net weight: 45 kg</p> <p>Additional requirements: Training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; 5 years certificate of availability of parts from the manufacturer</p>		
8	1	unit	<p><b>Laboratory Refrigerator &amp; Freezer</b></p> <p><i>Specifications:</i></p> <p><i>Cabinet type: upright, Cooling Type: forced air cooling, automatic defrost mode, CFC-free, temperature range: 2-8 degree Celsius (Refrigerator), -10 to -25 degree Celsius (Freezer), LED display, with microprocessor controller, electrical data: Power supply: 220-240 V, dimensions: 260L/cu.ft capacity, net/gross weight (approx.) 88-100kg, interior dimensions (WxDxH): at least 550x460x1065mm, exterior dimensions (WxDxH): at least 620x655x1720mm, functions: high/low temperature, power failure enabled, sensor error, low battery indicator</i></p> <p><i>Accessories included: caster, foot, at least 4 shelves</i></p> <p><i>Additional Requirements: Training on operation, maintenance and complete installation is included, the unit is certified with ISO</i></p>	50,000.00	50,000.00





			standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; 5 years certificate of availability of parts from the manufacturer		
9	1	unit	<p><b>LABORATORY FUME HOOD (Ready-made), Ducted, Single Wall Construction, General Purpose</b></p> <p>Specifications:</p> <p>1.) Fume hood - Internal Working area dimensions is at least 1120 mm (Width) x 682 mm (Depth) x 1435 mm (Height) and External Dimensions not more than 1200 mm (Width) x 873 mm (Depth) x 1500 mm (Height)</p> <p>Features: With front sash constructed of frameless tempered safety glass, Vertical rising fail-safe sash that tilts and locks if a cable snaps. Exhaust volume of at least 1109 cmh or better, Exhaust outlet Diameter of 25cm or larger, with fluorescent light, phenolic resin laminates main body and Interior baffle system, electrogalvanized steel, corrosion and abrasion resistant oven-baked epoxy-polyester powder-coated finish frame, stainless steel grade 304 Airfoil, equipped with a simple rocker switch for lights and fan control. Power supply is at least 220V.</p> <p>2.) Base Cabinet is electrogalvanized steel constructed coated with corrosion resistant coating. External Dimensions is not more than 1200 mm (W) X 850mm (D) X 886mm (H).</p> <p>Features/Inclusions:</p> <p>2.1) Base Cabinet's tabletop: black phenolic resin top; highly resistant to a wide variety of common acids (With sample presentation), solvents and chemicals, easy to clean and will not corrode,</p> <p>2.2) at least Four (4) electrical socket outlets with splash proof covers,</p>	800,000.00	800,000.00



		<p>2.3) 1 swan-neck remote control water faucet and 1 standard remote control fitting for gas,  2.4) polypropylene(PP) drip cup.  2.5) Cabinet doors with lever handles, and 2.6) rear access panel for plumbing</p> <p>Complete installation with Ductingworks with supervision of Registered Mechanical Engineer. Ducting works shall be installed in the Science Research Facility (SRF) Chemistry Lab. Ducting with at least 10inches diameter (or better) PVC pipe attached to the fumehood's duct and at least 12 inches (or better) PVC pipe attached to PVC Tee pipe connected to exhaust blower for exhaust, with air volume damper and exhaust blower, Gooseneck rounded throat exhaust, Proper location and installation of exhaust ductworks for the unit is included depending on the location allotted in the laboratory rooms in PSHS Calabarzon Region Campus - SRF. Included with Piping materials for tapping of water outlet and drainage to the tapping point(s) in the SRF building.</p> <p>Additional requirements/Certifications: Testing of the unit's operation and performance with sticker and report is included in compliance with ANSI/ASHRAE. Updated certificate of training (latest 2 years or better) of service engineer(s)for the application/installation of the unit (certificate shall have name of engineer, name/brand/model of the equipment, date of training, and name of trainer and the venue of training shall be the manufacturer's address). Hands - on training in operation, maintenance with service report on its function and operation, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</p>		
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10	2	unit	<p><b>Top Loading Balance</b></p> <p><i>Specifications: 220V; at least 4200g capacity; readability is 0.01g; pan diameter is at least 15cm; with RS232 interface data connectivity; certified with ISO9001</i></p> <p><i>Accessories included/Additional Requirements: Installation Included; With at least 2 years warranty service, 1year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	30,000.00	60,000.00
11	1	unit	<p><b>Analytical Balance</b></p> <p><i>Specifications: Weighing capacity: at least 320 grams; Minimum display: 0.1 mg or 0.0001g or better</i></p> <ul style="list-style-type: none"> <li>• <i>Repeatability: less than 0.15 mg or better</i></li> <li>• <i>Linearity: ± 0.3 mg or better</i></li> <li>• <i>Response reading time: 2 seconds or faster</i></li> <li>• <i>Pan size: at least 90 mm diameter</i></li> <li>• <i>Output terminal: RS232</i></li> </ul> <p><i>Additional Features: Digital display reading, with left, right and top draft shield doors; can fit or weigh 1L Erlenmeyer flask (Height = 21.5cm) inside the display housing, timer-triggered calibration mode, multi-weight units/ modes/ applications/ piece-counting and with overload protection mechanism.</i></p> <p><i>Additional requirements: Calibration sticker, calibration results and certificate of calibration from accredited ISO:17025 laboratory is included, training on operation, maintenance and complete installation is included, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking by the supplier or manufacturer twice a year; certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</i></p>	100,000.00	100,000.00



12	1	unit	<p><b>Hot plate magnetic stirrer (digital)</b></p> <p><i>Specification: Digital Installation Included; 220V; at least 17cm X 17cm top steel plate, at least 400 o C temperature capacity and 1200rpm stirring speed; with timer; digital read-out</i></p> <p><i>Additional Requirement: Certified with ISO9000; With at least 2 years warranty service, 1year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	20,000.00	20,000.00
13	1	unit	<p><b>Centrifuge</b></p> <p><i>Specifications: Installation Included; heavy duty; bench top, general purpose, with complete accessories, 220V; at least with 8 placer; can accommodate at least 7ml to 15ml centrifuge; with timer, safety lock upon opening; with at least 3000 rpm speed</i></p> <p><i>Accessories included/Additional Requirements: With ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	25,000.00	25,000.00
14	1	set	<p><b>Micropipette (100 to 1000 µL)</b></p> <p><i>Specifications: at least 100µL to 1000µL range; adjustable, highly durable and autoclavable</i></p> <p><i>Accessories included/Additional Requirements: Installation included; with ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	20,000.00	20,000.00



15	1	set	<p><b>Drying Oven</b></p> <p>Specifications: Volume capacity is at least 32 liters or above; temperature Range is up to 300<sup>o</sup>C or above; temperature variation and fluctuation is compliant to DIN standards; Heating up time is up to 25 minutes or faster; Main Body is corrosion resistant steel with epoxy powder-coated finish; Chamber is stainless steel; with at least 2 stainless shelves.</p> <p>Additional requirements:</p> <p>Calibration certificate and sticker from accredited ISO 17025 service provider. Hands - on training in operation, maintenance and complete installation is included with service report on its temperature function and operation in compliance with ISO standard, the unit is certified with ISO standards; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer annually for 2 years, certificate of distributorship of particular brand, and 5 years certificate of availability of parts from the manufacturer.</p>	140,000.00	140,000.00
16	1	pc	<p><b>Moisture Analyzer</b></p> <p><i>Specifications: Capacity up to 250 grams; digital display, 0.01 g accuracy; dimensions (W 180mm x H 140mm x L 330 mm)</i></p> <p><i>Accessories included: Moisture sample handling accessories, Printer for Moisture Analyzer, Protective Cover, Support Stand, Printer Holder</i></p> <p><i>Additional Requirements: CE Certification</i></p>	20,000.00	20,000.00



17	1	unit	<p><b>Vacuum Sealer Machine</b></p> <p><i>Specifications: Vacuuming Speed of 7l/ min; Nozzle vacuuming method; approx 4.4 kg; seal Length at least 300 mm / 11.8 in; Seal Width at least 5 mm / 0.19 in; Sealing Time 1 – 9 sec; Vacuuming Time Max. 60 sec; Dimensions W394×D266×H176mm</i></p> <p><i>Accessories included: sample bags (standard, embossed and aluminum vapor deposition bags), heating wires, PTFE Tapes, power cord, nozzle cleaning tool</i></p> <p><i>Additional Requirements: CE Certification</i></p>	45,000.00	45,000.00
18	2	units	<p><b>Hydroponic growing pipe system</b></p> <p><i>Specifications:</i></p> <p><i>Contains prefabricated PVC pipe system (Structure Material : Stainless steel / Hot-galvanized steel, Structure Dimension : Normally in 600 cm * 90 cm * 300cm , L= 400cm / 600cm or Customized, Channel Material : Food Grade PVC-U Round Channel ( 5 lays / 10 channels), Hole : 8 holes per Channel (2m) in 75 mm matched with 6# / 8# Net Pots or as customized, Parts : Outlet Timer / Pump / Water Tank and Pipe / Net Pots and Foams)</i></p> <p><i>Additional Requirements: Installation &amp; calibration included; with ISO9001 certification. With at least 1 year warranty service, 1 year for parts and 2 visits for cleaning and checking by the supplier; 5 years certificate of availability of parts from the manufacturer</i></p>	25,000.00	50,000.00
19	1	lot	<p><b>Chemical laboratory blower fan with installation</b></p> <p>Installation Included; PVC, polypropylene, or fiberglass reinforced plastic (FRP); acid</p>	25,000.00	25,000.00



			<p>resistant; to be attached to a cabinet in stockroom; must be suitable to any or all of the following cabinets:</p> <p>a. 46cm X 59cm X 90cm acid cabinets (2units)</p> <p>b. 46cm X 59cm X 90cm acid cabinets (2units)</p> <p>c. 100cm x 50cm X 165cm (4 units solid chemical cabinets)</p>		
20	1	pc	<p><b>Sky Quality Meter</b>                      Technical Specifications:                      - Half Width Half Maximum (HWHM) of the angular sensitivity: ~42°                      - battery operated                      - approximate size: 3.8 x 2.4 x 1 in.                      - maximum light sampling time: 80 seconds</p>	17,000.00	17,000.00
21	1	lot	<p><b>Viscometer</b>                      Technical Specifications:                      - digital viscometer                      - user interface with keypad control and viewing screen                      - displayed information include viscosity (cP, P, mPa*s or Pa*s)                      % Torque                      Speed and Spindle                      - Torque Measurement Accuracy: ±1.0% of range                      - Repeatability: ±0.2%                      - 18 different speeds (0.3 to 100 rpm)                      - 4-6 spindles                      - bubble level                      - spindle guard leg                      - lab stand                      - carrying case</p> <p>Additional requirements: Hands-on training in operation and maintenance. Complete installation and validation of the unit with service report is included. The unit is</p>	100,000.00	100,000.00



			certified with ISO standards and calibration certificate; With at least 2 years warranty service and 1 year for parts, Preventive maintenance certificate which will guarantee for cleaning and checking of the unit by the supplier or manufacturer twice a year.		
<b>22</b>			<b>Woodcraft and Metal Fabrication Equipments</b>		<b>671,000.00</b>
	3	units	<b>Heavy- Duty Bench Grinder</b> Technical Specifications: <ul style="list-style-type: none"> <li>• Corded electric bench grinder and powered <b>3/4 HP induction motor</b> that provides superior power for industrial grinding applications.</li> <li>• The heavy-duty bench grinder shall have two grinders with a safety guard capable of running <b>at 3,600rpm</b> of removing material in high-speed conditions.</li> <li>• The grinder shall be <b>36 or 60 grit wheels</b> equipped with spark guards, eye shield and tool rests.</li> <li>• Has rear exhaust ports in wheel guard for smoother operation.</li> <li>• Has precision-machined <b>aluminum tool rests</b> that will provide accurate position work.</li> <li>• Characterized by a rugged cast iron base and motor housing of the 8-inch bench grinder provide durability and prolonged life.</li> <li>• Additional requirements: Hands-on training in operation and maintenance. Complete installation and validation of the unit with service report is included.</li> <li>• Can provide 24 months warranty period and After Sales Support certification capable of responding after-sales support after warranty.</li> </ul>	20,000.00	60,000.00
	1	lot	<b>Radial arm saw</b> Technical Specifications: <ul style="list-style-type: none"> <li>• Oversized, highly visible bevel scale with positive stops.</li> </ul>	55,000.00	55,000.00





		<ul style="list-style-type: none"> <li>• Has a tall sliding fence supports a 6-3/4-inch base vertically.</li> <li>• Made up of stainless-steel miter detent plate of the 12-inch miter saw blade comes with 10 positive stops.</li> <li>• The miter saw has a precise miter system and machine base fence support. Can be beveled from 0-48 degrees left and right.</li> <li>• Has dual horizontal steel rails feature that allows innovative clamping mechanism and linear ball bearings for accuracy and durability.</li> <li>• The radial arm saw shall be efficient in a dust collection system that can capture at least 75% of the dust generated.</li> <li>• Can provide 12 months warranty period and 5-year certificate of availability of parts from the manufacturer</li> </ul>		
1	lot	<p><b>Belt Disc Sander</b></p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Capable of running 3,600rpm with a 4.3-amp 1/2 HP motor or any equivalent.</li> <li>• Can be easily sand, smooth, and removes jagged edges and splinters on wood.</li> <li>• Features: 4 x 36in belt and 6 inches Disc sander with cast iron base. 80-grit sanding belt and the sanding disc. The equipment shall have at least a dust port, miter gauge, and a beveling work table.</li> <li>• The sander belt can be tilted anywhere from 0 to 90 degrees to accommodate the need of the workpiece.</li> <li>• The sanding disc shall include a sturdy cast-aluminum work table</li> <li>• Additional requirements: Complete installation and validation of the unit with service report is included.</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	20,000.00	20,000.00



1	lot	<p><b>Table Saw</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Capable of ripping 4x8 sheet plywood and offers convenience/ ease in adjustments of rack and pinion telescoping of fence rails.</li> <li>• Operates at 15-amp power supply at 5,800rpm motor or equivalent.</li> <li>• Features: table saw, table saw fence, has an anti-kickback pawl, a miter gauge, push stick, non-thru cut riving knife, blade change wrenches, modular guard system, and 24T 8-1/4 in. blade</li> <li>• 8-1/4 inch Saw with guard</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	55,000.00	55,000.00
1	lot	<p><b>Router table</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Benchtop router table design that features a large aluminum top for extended work area.</li> <li>• Has rigid aluminum mounting plate for table height adjustment operation.</li> <li>• Has adjustable faceplates and feather boards to maximize precision. Easy to use/ adjust feather boards but provides maximum kickback protection.</li> <li>• Allow connecting 2-1/2-inch vacuum hose for dust collection mechanism.</li> <li>• Features: has miter gauge, storage pockets, cord wrap storage, two outfeed shims, and an aluminum router mounting plate.</li> <li>• Accessories and maintenance tools shall be provided by the supplier for the convenience of adjusting table height.</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	40,000.00	40,000.00
3	lot	<p><b>Benchtop Drill Press</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Has oversized ergonomic knobs for maximum control.</li> </ul>	25,000.00	75,000.00





			<ul style="list-style-type: none"> <li>• Has retractable roller extension that provides support and quick workpiece adjustments.</li> <li>• Has a large paddle switch that will provide easy shut-off and lockout protection.</li> <li>• Corded electric and operates at 115 V or higher with at least 3,100rpm (1/2 HP induction motor) for the speed of the motor.</li> <li>• Allow connecting 2-1/2-inch vacuum hose for dust collection mechanism.</li> <li>• Features: table tilt at 90 degrees, oscillating spindle at 3/4 inch, has table dust port,</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>		
	1	lot	<p><b>Circular Saw</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Includes a 7 -1/4 circular saw operated with an electric brake that stops the blade after the trigger is released.</li> <li>• Operates at least a 15-amp motor of the compact circular saw delivers power at 5,200 rpm and produces a cut capacity of 2 9/16-inch depth.</li> <li>• Has durable high-grade Aluminum smooth base for accurate cuts. The circular saw shall also have the capability of beveling 57 degrees with stop features at 45 degrees and 22.5 degrees.</li> <li>• Has a vacuum adaptor for convenience of cleaning.</li> <li>• The circular saw has to be lightweight for convenience in tooling and offers a safety lock-off feature to avoid an accident.</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>	16,000.00	16,000.00
	1	lot	<p><b>Band Saw</b>                      Technical Specifications:</p>	65,000.00	65,000.00



			<ul style="list-style-type: none"> <li>• 1HP bandsaw that can be used in a 110V/220V power source. Operates at 1,725rpm and 14amps.</li> <li>• Blade size: 93-1/2 inch (1/8-inch to 3/4 inch wide). Cutting capacity needs to be at least 13-1/2 inches at a vertical height of 6-inch.</li> <li>• The item has a bed table with at least 14-inch x 14-inch x 1-1/2-inch dimension and can be tilted 45degrees right, and 10 degrees left.</li> <li>• The item shall be made of cast iron blade wheels, frame, and table</li> <li>• The circular saw has to be lightweight for convenience in tooling and offers a safety lock-off feature to avoid an accident.</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> </ul>		
	1	lot	<p><b>Flux Cored Welding Machine</b>            Technical Specifications:</p> <ul style="list-style-type: none"> <li>• The supplier shall provide a portable and lightweight welding machine that uses insulated gate bipolar transistor technology.</li> <li>• The supplier shall provide a 200A welding machine with MIG/ARC/ LIFT TIG gas gasless multi-function 220V DC inverter welder.</li> <li>• Available to a wide range of thicknesses for flux-cored wire</li> <li>• The supplier shall provide 1kg 0.8-1.0 mm solid wire with gas welding iron including 0.8-1.0mm flux-cored wire without gas welding carbon steel and stainless steel.</li> <li>• The machine shall be equipped with an MB15 MIG gun, earth clamp, electrode holder, gas tube, 1kg 1.0/0.8mm flux-cored wire, and portable plug.</li> <li>• Can provide 24 months warranty period and 5-year certificate of availability of parts from the manufacturer.</li> <li>• Inclusion of basic training from a certified local trainer and can provide a training certificate from the reputable manufacturer.</li> </ul>	15,000.00	15,000.00



	5	units	<p><b>Rapid Acting vise</b>  <b>Technical Specifications:</b></p> <ul style="list-style-type: none"> <li>• It should be heavy-duty cast iron with dimensions similar to or near 18.79 x 8.63 x 7.76 inches. It shall be fit to a 3.5" thick workbench.</li> <li>• 30,000 PSI cast iron construction, blue powder coat finish.</li> <li>• The vise has a quick release level that allows rapid opening and closing of the vise.</li> <li>• Engineered for optimal safety following dimensions like 9" jaw width, jaw opening 10", throat depth 4.06".</li> <li>• The supplier shall/can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>	15,000.00	75,000.00
	3	units	<p><b>Table Vise</b>  <b>Technical Specifications:</b></p> <ul style="list-style-type: none"> <li>• It should be heavy-duty cast iron with dimensions nearly 11 x 11 x 7.5 inches.</li> <li>• 30,000 PSI cast iron construction, blue powder coat finish.</li> <li>• Can hold 0.6" dia to 1.85" dia pipes and tubes.</li> <li>• Anvil: 1.75" x 2"</li> <li>• Screw diameter: 0.6" (1.5cm), handle diameter: 0.4" (1cm) x Handle length 6" (15.2cm)</li> <li>• Capable of 240-degree swivel base rotating the vise for versatility.</li> <li>• The supplier shall/can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>	15,000.00	45,000.00
	3	units	<p><b>Benchtop Wood Lathe</b>  <b>Technical Specifications:</b></p> <ul style="list-style-type: none"> <li>• The wood lathe shall be made of cast iron and designed to fit neatly on a workbench.</li> <li>• The item shall be 1/3 horsepower, with a variable speed motor that allows spindle speed between 700 – 3,200rpm.</li> </ul>	50,000.00	150,000.00



			<p>The item will be plugged in a single-phase, 60Hz power source at 220V AC.</p> <ul style="list-style-type: none"> <li>• 8-inch swing over bed and includes two tool rests.</li> <li>• Other Features: has a safety paddle switch, 4-1/4 inch and 7-inch tool rest, a 5-3/4 inch faceplate, 3/4-by-16 inch TPI RH spindle, an MT No. 1 live center, and an MT No. 1 spur center.</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>		
23			<b>Rapid Prototyping and Fabrication Lab Equipments</b>		1,757,500.00
	1	lot	<p><b>Cutter plotter</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Grit rolling type with a maximum cutting area of 603mm x 50m.</li> <li>• Graphic type LCD with backlight display (240x128 dots). Machine Design with an external dimension of 900 x 593 x 1046mm</li> <li>• Can be operated by 200-240V AC (Auto switch), 50/60Hz</li> <li>• Operate at a maximum cutting speed of 900mm/s.</li> <li>• Comprise of 2 push rollers and a Supersteel blade that can be operated at a maximum acceleration of 21.2m/s</li> <li>• Inclusion of windows driver, dedicated software for the machine, and plotter controller</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> </ul>	197,500.00	197,500.00



			<ul style="list-style-type: none"> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> </ul>		
1	lot	<p><b>All in one IDEX Desktop 3D printer</b></p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Design utilizing Fused Deposition Modeling (FDM) technology with precise positioning resolution at 0.78125 micron on x/y axis.</li> <li>• Independent Dual Extruder print head system</li> <li>• Capable of WiFi, LAN, USB Port, USB Drive connectivity</li> <li>• Fully enclosed 3D printer chamber with Aluminum build plate capable of flatness detection through its mesh leveling and magnetic holding feature.</li> <li>• Maximum build volume of 330x240x240mm and has auto resume print functionality</li> <li>• Inclusion of 1 set of 3D printer Kit and at least 2x 1kg filament spool</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	440,000.00	440,000.00	
1	lot	<p><b>Vacuum Forming Machine</b></p> <p>Technical Specification:</p> <ul style="list-style-type: none"> <li>• Vacuum forming machine with a forming area of 430 x 280mm and up to 160mm depth of draw.</li> <li>• Composed of 4 heating zones utilizing Quartz as heater type.</li> <li>• Sheet size: 450 x 300mm</li> <li>• Offers package inclusion of vacuum forming machine accessories like 1 unit of a trolley and at least 1 set starter pack of plastics.</li> </ul>	1,120,000.00	1,120,000.00	



			<ul style="list-style-type: none"> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding after sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>		
<b>24</b>			<b>Sewing Equipments</b>		<b>100,000.00</b>
	1	Lot	<b>High Speed Lockstitch Industrial Sewing Machine</b> Technical Specifications: <ul style="list-style-type: none"> <li>• The supplier shall provide a lockstitch sewing machine with an automatic thread trimmer.</li> <li>• The item shall have a control box and operation panel integrated with the machine head.</li> <li>• Direct drive sewing machine that only utilizes 1 thread and operates at 220V AC</li> <li>• The item shall provide LED lighting to the fabric sewn. This shall also</li> <li>• Has a highly functional touch-back switch.</li> <li>• The high-speed sewing machine shall allow DBx 1(#14) or #14-#18 needle.</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding after sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	50,000.00	50,000.00
	1	lot	<b>High-Speed Overlock/ Safety stitch Machine</b> Technical Specifications:	50,000.00	50,000.00





		<ul style="list-style-type: none"> <li>• Offers advanced overlock mechanism that has safety switches easier to use and cost-effective.</li> <li>• Can be operated at a maximum speed of 7,000 sti/min with a stitch length of 0.6 to 3.8mm</li> <li>• Overedging width: 1.5 - 6.0mm</li> <li>• Needle bar stroke can accommodate 24.5mm and needle inclination set at 20-degree angle.</li> <li>• Maximum presser foot pressure: 63.7N</li> <li>• Needle: DCx27</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>		
<b>25</b>		<b>Electronics Test Equipments</b>		<b>520,000.00</b>
	4 Units	<b>100MHz Digital Oscilloscope (4 channels standard decoder)</b> Technical Specifications: <ul style="list-style-type: none"> <li>• The supplier shall provide an oscilloscope that has SPO (Super-Phosphor-Oscilloscope) technology.</li> <li>• Has a minimum vertical input range of 500 uV/divan innovative digital trigger system with high sensitivity and low jitter.</li> <li>• Capable of documenting Waveform capture rate at 400,000 frames/sec.</li> <li>• Has 256- level intensity grading display feature including color temperature display.</li> <li>• Serial bus decoding for IIC, SPI, UART, CAN, LIN bus types shall be included. MSO capable.</li> <li>• Has an embedded application that allows remote control via a web browser.</li> </ul>	40,000.00	160,000.00



		<ul style="list-style-type: none"> <li>• Capable of searching and navigating, on-screen Bode plot, 16 digital channels. Has an external powered 25 MHz AWG module (Option) and a USB WiFi Adapter (option).</li> <li>• Inclusion of 100Mhz Oscilloscope clip probes with an accessory kit and BNC to minigrabber test lead set.</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>			
	4	Units	<p><b>Waveform Function Generator</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Dual-channel 40MHz (sine wave) with touch screen display. Has USB/ LAN interface.</li> <li>• Capable of 16-bit vertical resolution with a built-in high precision frequency counter.</li> <li>• Inclusion of license software for editing arbitrary waveforms.</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	45,000.00	180,000.00
	4	units	<p><b>Triple Output Power Supply</b>                      Technical Specifications:</p> <ul style="list-style-type: none"> <li>• 3 independent controlled and isolated outputs. Capable of independent, series, and parallel configurations. Compatible with a 100-230V power source.</li> </ul>	45,000.00	180,000.00





			<ul style="list-style-type: none"> <li>• USB/ LAN interfaces and have timing functions. At least 4.3-inch True color TFT LCD 480x272 display.</li> <li>• 5-digit Voltage/ 4-digit current display at a minimum resolution of 1mV/ 1mA.</li> <li>• Has timing output function and trending graphs. Allows the user to measure accuracy using the following setup: 32V/3.2A, 2.5V/3.3V/5V/3.2A x 1. Total power: 220W.</li> <li>• Inclusion of basic training from a certified local trainer who can provide a training certificate from a reputable manufacturer.</li> <li>• Can provide 24 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>		
26			<b>Spray system and Dust Collection Equipments</b>		151,500.00
	2	Lot	<b>Airbrush Spray Booth</b> Technical Specifications: <ul style="list-style-type: none"> <li>• The item has at least 3 LED lights (12w at 2340LM luminous flux) capable of operating at 220-240V 50/60Hz power supply.</li> <li>• Portable and can be easily folded into a suitcase for carrying or storing.</li> <li>• Has a flexible exhaust extension hose up to 67-inches. Has a revolving turntable to reach all the areas to be painted.</li> <li>• Dimension should not be less than 18.19 x 13.46 x 10.53 inches.</li> <li>• Can provide a 12 months warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	20,750.00	41,500.00



	1	Lot	<p><b>2HP Dust Collector</b>  <b>Technical Specifications:</b></p> <ul style="list-style-type: none"> <li>• 2HP Dust collector capable of making efficient air movement while plugged at 220-240V AC supply.</li> <li>• The item needs to be enclosed, fan-cooled motors, and quick-connect collection bags with an elastic band.</li> <li>• Inclusion of see-through dust bags, 2-micron canister kit, Flexible clear view heavy duty PVC hose (4"x20 feet), and hose cone reducer (4-inch hose to 2-1/2)</li> <li>• Has ergonomic knobs that are easy to handle and four heavy-duty casters for ease in mobility.</li> <li>• Uses the Vortex Cone technology that eliminates filter clogging and strengthens performance quality.</li> <li>• Dimension should not be less than 37.5 x 22.5 x 39 inches.</li> <li>• Can provide a 5 years warranty period and After Sales Support certification capable of responding to after-sales support after warranty.</li> <li>• Can provide certification of parts availability issued by the manufacturer for the project.</li> </ul>	110,000.00	110,000.00
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**TOTAL AMOUNT: P 7,000,000.00**



**Sample Pictures**



Item No 1: Ultrapure water purification system



Item No 2: Emergency eyewash and shower



Item No 3: Muffle furnace



Item No 4: Biosafety cabinet



Item No 5: Laminar Flow Clean Bench



Item No 6: Autoclave



Item No 7: Laboratory incubator



Item No 8: Refrigerator



Item No 9: Fume Hood



Item No 10: Toploading/Precision balance



Item No 11: Analytical balance



Item No 12: Hotplate magnetic stirrer



Item No 13: Centrifuge



Item No 14: Micropipette



Item No 15: Drying oven



Item No 16: Moisture analyzer



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**Item No 17: Vacuum sealer**



**Item No 18: Hydroponic growing pipe system**



**Item No 19: Chemical Laboratory blower fan**



**Item No 20: Sky Quality Meter**



**Item No 21: Viscometer**



Item No 22: Heavy-duty Grinder



Item No 23: Radial Arm Saw



Item No 24: Belt disc sander



Item No 25: Table saw



Item No 26: Router Table



Item No 27: Benchtop Drill Press



Item No 28: Circular saw



Item No 29:  
Band saw



Item No 30: Flux cord welding  
machine



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Item No 31: Rapid Acting Vise



Item No 32: Table Vise



Item No 33: Cutter Plotter



Item No 34: Desktop 3D Printer



Item No 35: Vacuum Forming Machine



Item No 36: High Speed Lockstitch Industrial Sewing Machine



Item No 37: High Speed Overlock Safety Switch Machine



Item No 38: Benchtop Wood Lathe



Item No 39: Digital Oscilloscope



Item No 40: Waveform Function Generator



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Certificate No.: SC:P0002400



**Item No 41: Triple  
Output Power Supply**



**Item No 42: Air brush  
Spray Booth**




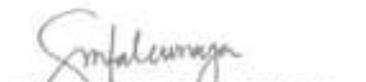
**Item No 43: 2HP Dust Collector**



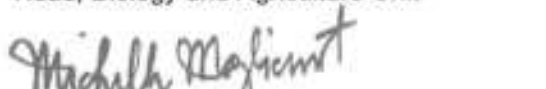



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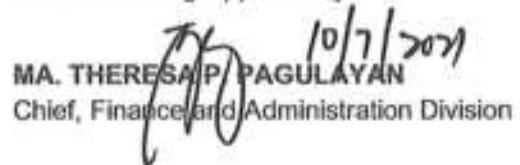
  
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