

PHILIPPINE BIDDING DOCUMENTS

Procurement of GOODS

Government of the Republic of the Philippines

***FOR Project 2025-9E: Supply , Delivery, and
Installation of Machinery and Laboratory
Equipment of NVSU Engineering Programs.***

**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 ForeignAssisted 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
NUEVA VIZCAYA STATE UNIVERSITY
Bayombong, Nueva Vizcaya

FOR Project 2025-9E: Supply , Delivery, and Installation of Machinery and Laboratory Equipment of NVSU Engineering Programs.

1. The Nueva Vizcaya State University, through Trust Fund(EFP) FY 2025 intends to apply the sum of *Five Million pesos (P5,000,000.00)* being the Approved Budget for the Contract, to payments under the contract for *Project 2025-9E: Supply, Delivery, and Installation of Machinery and Laboratory Equipment of NVSU Engineering Programs*. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The Nueva Vizcaya State University now invites bids for the above Procurement Project. Delivery of the Goods/Equipment is required by *sixty (60) calendar days*. Bidders should have completed, within *two (02) years* from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).
3. Bidding will be conducted through open competitive bidding procedures using a nondiscretionary "*pass/fail*" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA No. 5183.

4. Interested Bidders may obtain further information from *NVSU-BAC* and inspect the Bidding Documents at the address given below during *Mondays-Fridays from 8:00AM to 5:00PM*.
5. A complete set of Bidding Documents may be acquired by interested Bidders starting on *June 20, 2025* 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 Php5,000.00*. The Procuring Entity shall allow the bidder to present its proof of payment for the fees *through electronic means*.


NVSU LANDBANK ACCOUNT No.: 0432-1028-82

6. The NVSU will hold a Pre-Bid Conference¹ on *June 27, 2025, 2:00 PM at the Board Room, 3F New Administration Building, NVSU Bayombong Campus* through video conferencing/webcasting via **ZOOM (Meeting ID: 525 793 2135 Passcode: nvsu@2025)** 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 *July 10, 2025, at 8:59 AM*. 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 *July 10, 2025, at 9:00 am* at the given address and via **ZOOM (Meeting ID: 525 793 2135 Passcode: nvsu@2025)** Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
10. The *Nueva Vizcaya State University* 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:

DR. MARITESS N. MORTERA
MS. MARY JANE C. TIME
MS. MARY JANE A. DULINAYAN
MS. SHIELA L. BULUSAN
MS. AUSTIN EMBER T. BOBILA
MR. JUNE CARLOS R. VILLACENTINO
UBAC Secretariat

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

12. You may visit the website:
For downloading of Bidding Documents: www.nvsu.edu.ph June 20, 2025


CARLO F. VADIL
UBAC Chairperson, Equipment

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

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

1. Scope of Bid

The Procuring Entity, Nueva Vizcaya State University, wishes to receive Bids for *Project 2025-9E: Supply, Delivery, and Installation of Machinery and Laboratory Equipment of NVSU Engineering Programs [insert, if applicable:]* under a Framework Agreement}, with identification number *[indicate number]*.

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

The Procurement Project referred to herein as *2025-9E: Supply, Delivery, and Installation of Machinery and Laboratory Equipment of NVSU Engineering Programs* is composed of *twenty-one (21)* item/s, 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 *Trust Fund FY2025 [indicate funding year]* in the amount of *five million pesos (Php5,000,000.00) [indicate amount]*.

2.2. The source of funding is: TF

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

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

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

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

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

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

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

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

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

5. Eligible Bidders

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

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

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

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

[Select one, delete the other/s]

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

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

6. Origin of Goods

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

7. Subcontracts

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

The Procuring Entity has prescribed that:

[Select one, delete other/s]

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

8. Pre-Bid Conference

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

9. Clarification and Amendment of Bidding Documents

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

10. Documents comprising the Bid: Eligibility and Technical Components

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

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

11. Documents comprising the Bid: Financial Component

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

12. Bid Prices

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

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

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

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

13. Bid and Payment Currencies

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

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

[Select one, delete the other/s]

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

14. Bid Security

- 14.1. The Bidder shall submit a Bid Securing Declaration² or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 14.2. The Bid and bid security shall be valid until *[indicate date]*. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.
- 14.3. *[Include if Framework Agreement will be used:]* In the case of Framework Agreement, other than the grounds for forfeiture under the 2016 revised IRR, the bid security may also be forfeited if the successful bidder fails to sign the Framework Agreement, or fails to furnish the performance security or performance securing declaration. Without prejudice on its forfeiture, bid securities shall be returned only after the posting of performance security or performance securing declaration, as the case may be, by the winning Bidder or compliant Bidders and the signing of the Framework Agreement.

15. Sealing and Marking of Bids

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

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

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

16. Deadline for Submission of Bids

- 16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

² 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.

- 16.2. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, the submission of bids shall be for the initial evaluation of their technical and financial eligibility. Thereafter, those declared eligible during the said initial eligibility evaluation and entered into a Framework Agreement with the Procuring Entity shall submit anew their best financial offer at the address and on or before the date and time indicated in the Call for each minicompetition.

17. Opening and Preliminary Examination of Bids

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

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

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

18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.
- 18.2. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, determination of margin of preference shall be conducted every call for Mini-Competition.

19. Detailed Evaluation and Comparison of Bids

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

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

- a. In the case of single-year Framework Agreement, the Lowest Calculated Bid shall be determined outright after the detailed evaluation;
- b. For multi-year Framework Agreement, the determination of the eligibility and the compliance of bidders with the technical and financial aspects of

the projects shall be initially made by the BAC, in accordance with Item 7.4.2 of the Guidelines on the Use of Framework Agreement.

- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.
- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded as follows:

[Select one, delete the other/s]

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

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

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

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

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

20. Post-Qualification

- 20.1. *[Include if Framework Agreement will be used:]* For multi-year Framework Agreement, all bidders initially determined to be eligible and financially compliant shall be subject to initial post-qualification. The BAC shall then recommend the execution of a Framework Agreement among all eligible, technically and financially compliant bidders and the Procuring Entity and shall be issued by HoPE a Notice to Execute Framework Agreement. The determination of the Lowest Calculated Bid (LCB) shall not be performed by the BAC until a Mini-Competition is conducted among the bidders who

executed a Framework Agreement. When a Call for Mini-Competition is made, the BAC shall allow the bidders to submit their best financial proposals on such pre-scheduled date, time and place to determine the bidder with the LCB.

- 20.2. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, *{[Include if Framework Agreement will be used:] or in the case of multi-year Framework Agreement, that it is one of the eligible bidders who have submitted bids that are found to be technically and financially compliant,}* the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**. *{[Include if Framework Agreement will be used:] For every mini-competition in Framework Agreement, the LCB shall likewise submit the required documents for final Post Qualification.}*

21. Signing of the Contract

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

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

- 21.2. At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity shall send the Framework Agreement Form to the Bidder, which contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.
- 21.3. Within ten (10) calendar days from receipt of the Notice to Execute Framework Agreement with the Procuring Entity, the successful Bidder or its duly authorized representative shall formally enter into a Framework Agreement with the procuring entity for an amount of One Peso to be paid to the procuring entity as a consideration for the option granted by the procuring entity to procure the items in the Framework Agreement List when the need arises.
- 21.4. The Procuring Entity shall enter into a Framework Agreement with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.
- 21.5. The following documents shall form part of the Framework Agreement:
- a. Framework Agreement Form;
 - b. Bidding Documents;
 - c. Call-offs;
 - d. Winning bidder's bid, including the Technical and Financial Proposals, and all other documents/statements submitted (e.g., bidder's response to

request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

- e. Performance Security or Performance Securing Declaration, as the case may be;
- f. Notice to Execute Framework Agreement; and
- g. Other contract documents that may be required by existing laws and/or specified in the **BDS**.

Section III. Bid Data Sheet

Notes on the Bid Data Sheet

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

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

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

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

Bid Data Sheet

ITB Clause													
5.3	For this purpose, contracts similar to the Project shall be: a. [provide the definition or description of similar contracts]. b. completed within two (2) years prior to the deadline for the submission and receipt of bids.												
7.1	[Specify the portions of Goods to be subcontracted, which shall not be a significant or material component of the Project as determined by the Procuring Entity.] Not applicable												
12	The price of the Goods shall be quoted in Philippine peso.												
14.1	The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts: a. The amount of not less than two hundred twenty-four thousand five hundred pesos only (Php100,000.00) [Indicate the amount equivalent to two percent (2%) of ABC], if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable letter of credit; or b. The amount of not less than five hundred sixty-one thousand two hundred fifty pesos only (Php250,000.00) [Indicate the amount equivalent to five percent (5%) of ABC] if bid security is in Surety Bond.												
19.3	[In case the Project will be awarded by lot, list the grouping of lots by specifying the group title, items, and the quantity for every identified lot, and the corresponding ABC for each lot.] [In case the project will be awarded by item, list each item indicating its quantity and ABC.] <table><tr><th>Item No.</th><th>Unit</th><th>Particulars</th><th>Qty</th><th>Unit Cost</th><th>Total Cost</th></tr><tr><td>I.</td><td>Unit</td><td>LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level</td><td>1</td><td>206,767.00</td><td>206,767.00</td></tr></table>	Item No.	Unit	Particulars	Qty	Unit Cost	Total Cost	I.	Unit	LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level	1	206,767.00	206,767.00
Item No.	Unit	Particulars	Qty	Unit Cost	Total Cost								
I.	Unit	LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level	1	206,767.00	206,767.00								

			<p>-98 dBm / Hz at 10KHz offset phase noise</p> <p>Built-in switchable preamplifier 1 Hz minimum RBW</p> <p>All digital IF technology</p> <p>256 5mm (1024 x 600) display</p> <p>0 to +50 °C operating temperature</p> <p>USB host: USB-A 2.0+ USB</p> <p>LAN: 10/100 Base, RJ45</p> <p>Source: 100-240 VAC, 60Hz</p> <p>Internal storage: 256MB</p> <p>EMC: EN 61326-1:2013</p> <p>Electrical Safety: EN 61010-1:2010</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>			
	2.	set	<p>LABORATORY EQUIPMENT, Conveyor Belt Kit for Intelligent Robotic Arm -</p> <p>General Specs:</p> <p>Payload: 500 g</p> <p>Effective Delivering Distance: 600 mm</p> <p>Maximum Speed: 120 mm/s</p> <p>Maximum Acceleration 1100 mm/s²</p> <p>Net Weight: 4.2 Kg</p> <p>Weight: (Including Packing) 5.34 Kg</p> <p>Dimension: 700 mm x 215 mm x 60 mm</p> <p>Distance Measuring Sensor Unit Specs:</p> <p>Measurable Range: 20 ~ 150 mm</p> <p>Signal Analog Output</p> <p>Input: 4.5 ~ 5.5 V</p> <p>Color Recognizing Sensor Unit Specs:</p> <p>Input: 3 ~ V</p> <p>Detectable: Non-glowing object White LED:</p>	1	90,000.00	90,000.00

			Embedded, on/off controllable			
			With manufacturer's warranty With ISO 17025 Certification			
	3.	set	<p>LABORATORY EQUIPMENT, Desktop for Intelligent Robotic Arm -</p> <p>Processor: 13th Gen i7 RAM: 16GRAM</p> <p>External Graphics Card: 12GB</p> <p>Storage: 512GB SSD</p> <p>Monitor: 23-25in</p> <p>Operating System: Windows 11</p> <p>Warranty: 1yr.</p> <p>Note: Computer brand must be more than 15 years in the industry</p> <p>Free training/Installation and testing and training of employees/faculty members in the use of the above items.</p> <p>Calibration of all the items/ Installation and testing and training</p> <p>Manufactured under ISO 9001-2015</p> <p>With manufacturer's warranty</p>	2	74,000.00	148,000.00
	4.	set	<p>LABORATORY EQUIPMENT, Intelligent Robotics Arm</p> <p>Education al Version</p> <p>General</p> <p>Specs:</p> <p>Number of Axis: 4 Payload: 500 g</p> <p>Max. Reach: 320mm</p> <p>Position:</p> <p>Repeatability (Control): 0.2 mm</p> <p>Communication: USB / Wi-Fi / Bluetooth</p> <p>Power Supply: 100V - 240V, 50/60 HZ? Power In: 12V</p>	2	228,000.00	456,000.00

		/ 6.5A DC Consumption: 78W Max Working Temperature: -10° - 60° C Axis Movement (Range and Speed): Axis: Range / Max Speed (250 g workload) Joint 1: (Base) -120° ~+120° / 320° / s Joint 2: (Rear Arm) - 5°~+90°320° / s Joint 3: (Forearm) - 15°~+90°320° / s Joint 4: (Rotation Servo) - 140°~+140°480° / s End Effectors: 1 set 3D Printer Kit Maximum Print Size: 150mm×150 mm×150mm 3D Printing Material: PLA Resolution: 0.1 mm 1 set Laser Engraver Power Consumption: 500 mw Type: 405 nm (Blue Laser) Power: 12 V, TTL trigger (With PWM Driver) 1 set Pen Holder Pen Diameter: 10 mm 1 set Vacuum Suction Cup Suction Cup Diameter: 20 mm Pressure: -35 Kpa 1 sets Gripper Range: 27.5 mm Drive Type: Pneumatic Force: 8N With manufacturer's warranty With ISO 17025 Certification			
5.	set	LABORATORY EQUIPMENT, Linear Rail Kit for	1	146,000.00	146,000.00

			<p>Intelligent Robotic Arm -</p> <p>General Specs:</p> <p>Payload: 5 kg</p> <p>Effective Travel Distance: 1000 mm</p> <p>Maximum Speed: 150 mm/s</p> <p>Maximum Acceleration: 150 mm/s²</p> <p>Repeat Positioning Accuracy: 0.01 mm</p> <p>Absolute Positioning Accuracy: 0.25 mm</p> <p>Net Weight: 4.7 kg</p> <p>Gross Weight: 7.23 kg</p> <p>Dimension: (Length x Width x Height) 1320 mm x 120 mm x 55 mm</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>			
	6.	set	<p>LABORATORY EQUIPMENT, Local Area Network (LAN) Trainer-</p> <p>Technical Specifications</p> <p>Hardware:</p> <p>PC to PC using RJ-45 connector</p> <p>Star topology</p> <p>Bus topology</p> <p>Ring topology</p> <p>Data transmission speed: 10/100 Mbps</p> <p>Software:</p> <p>Star, Bus, Ring selection</p> <p>Protocols: CSMA/CD, CSMA/CA, Token ring, Token Bus</p> <p>Complete analysis of Network and Protocols</p> <p>Error generations</p> <p>Packet size: 128, 256, 512, or higher</p> <p>Training Content:</p>	1	374,900.00	374,900.00

			Addressing in TC/IP Ping Command Implementation to PC to PC Implementation of Peer-to-Peer network Implementation of Client-Server Network Implementation of Wireless LAN protocols Implementation of CRC technique Accessories included: RJ45 -RJ45 connector cable USB dongle DB9 connectors cable END terminator Patch cords Mains cord Computer Set Minimum i3 processor 13th generation Windows 7, Hard drive: 1TB SSD RAM: 16 GB Monitor Size: 19" Monitor 3-year warranty With ISO 17025 Certification			
	7.	bundle	LABORATORY EQUIPMENT, Microcontroller -Starter Learning Kit (Complete Laboratory Equipment Set, (1 bundle=10 sets) General Specs: Prototyping Shield Jumper Cables M/M x 30 Jumper cables F/M x 10 Resistor 220 R x 20 Resistor 4.7 K x 20 Resistor 10K x 20 Resistor 1K x 20 5 mm LED x 10 IR Receiver Diode x 1	1	59,433.00	59,433.00

			Mini-push Button x 4 Ambient light sensor x 1 Tilt switch sensor x 1 8-segment LED x 1 LM35 temperature sensor x 1 Relay x 1 Buzzer x 1 Fan x 1 130 Motor x 1 10K Potentiometer x 3 Micro Servo x 1 Mini control x1 6 AA Battery Holder x 1 400 tie point interlocking solderless breadboard x 1 Training Content: Blinking LED SOS beacon Traffic light Fading light RGB LED Alarm Temperature alarm Detecting vibration Auto Light Moving servo Interact with servo RGB Light dimmer Motor fan Infrared controlled light Infrared controlled LED matrix With manufacturer's warranty With ISO 17025 Certification			
	8.	unit	LABORATORY EQUIPMENT, Multiple PLC Systems Trainer (3 different PLC) - General Specs: Compact type PLC training system Eight digital inputs Six digital outputs	1	358,900.00	358,900.00

			<p>Six analog inputs Two analog outputs Can be connect and control SCADA Can be connect and control HMI Ladder simulation Analog and Digital sensor compatibility</p> <p>Technical Specifications: Eight digital inputs Six digital outputs Six Analog input Two analog outputs RS232 compatible RS485 compatible 24 Volts DC input Seven push button switches Two relays One DC motor Three pilot lights One photoelectric sensor 12V DC, NPN, 5mm, 1 KHz One photoelectric Sensor with Mirror feedback, 24 VDC, NC, NO Power: 220 Volts input/ 24V DC output/ 5 Amp</p> <p>Training Content: Emergency stop training Push On and Off Training Traffic light Control Training Relay Control Training Motor Control Training Sensor Control Training Analog input and output Control Training Counter Control Training Timer Control Training SCADA Interface</p>			
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			<p>Training</p> <p>PLC</p> <p>Programmi</p> <p>ng Training</p> <p>Accessories</p> <p>included:</p> <p>Communication Cable</p> <p>30 pcs connecting cables</p> <p>Power Cables</p> <p>PLC programming</p> <p>Software</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>			
	9.	set	<p>LABORATORY EQUIPMENT,</p> <p>Vision System Kit for</p> <p>Intelligent</p> <p>Robotic Arm -</p> <p>General Specs:</p> <p>Focus: 60mm</p> <p>Lens Diameter: Focal Length:</p> <p>1:14 Maximal Length size:</p> <p>8.8mm x 6.6mm Aperture: F1.4-</p> <p>F16C</p> <p>Aperture and Focus Point</p> <p>Control: Manual</p> <p>With HD Color Industrial Camera</p> <p>Sensor Size: ½ CMOS</p> <p>Effective Pixel: at least 3Million</p> <p>Shutter Type: Curtain Exposure</p> <p>Exposure Control: Manual &</p> <p>Auto With USB data interface</p> <p>With White Auxiliary Light</p> <p>Source Luminous Color:</p> <p>White Illumination: 40000 lux</p> <p>Output Voltage 12V DC Output</p> <p>Power: 5-35W</p>	1	160,000.00	160,000.00

			Operating Distance: 35-110mm With manufacturer's warranty With ISO 17025 Certification			
	10.	unit	MACHINERY AND EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument Heat capacity: About 10500 J / K Oxygen bomb capacity: 300ml Oxygen charging pressure: 2.8 ~ 3.2 MPa Pressure resistance: water pressure 20MPa Weight: 2.5 kg Overall dimension: 650 * 450 * 500 mm Temperature range: 0 ~ 40 °C Response time: < 4 S Resolution: 0.0001 Linearity: < 0.08% per 5 °C temperature rise range Temperature measurement error: ± 0.003 Power supply voltage: AC220V ± 10% Humidity: up to 80% Power: 30W Ignition voltage: AC24 V Ignition time: 5S With manufacturer's warranty With ISO 17025 Certification	1	230,000.00	230,000.00
	11.	unit	MACHINERY AND EQUIPMENT, Brake dynamometer Power range: 10-20 hp Max RPM: 2000 rpm Max Torque: 400 Nm With manufacturer's warranty With ISO 17025 Certification	1	250,000.00	250,000.00
	12.	unit	MACHINERY AND EQUIPMENT, Diesel engine with common rail intercooler Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors	1	96,000.00	96,000.00

			Turbo-supercharger with air-air intercooler Alternator-oil filter-oil pump			
	13.	unit	<p>MACHINERY AND EQUIPMENT, Gasoline engine with common rail Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air to air intercooler Alternator-oil filter-oil pump</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	96,000.00	96,000.00
	14.	unit	<p>MACHINERY AND EQUIPMENT, Lab Mill/Husker Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr Power: 400 W (0.5 hp) single phase Head Power: 1,900 RPM Follow power: 1,000 RPM Size: 720x 480 x 1400 mm Weight: 49kg Power source: 220 V, 60 hz</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	118,000.00	118,000.00
	15.	unit	<p>MACHINERY AND EQUIPMENT, Laboratory Oven (Forced Air-Drying Oven) Capacity: 54L Temp. Range: RT+10°C~300°C Temp. Precision: 0.1°C Temp. Uniformity: ≤Max Temp.±2.5% Circulation Mode: Back heating, forced convection Timing Range: 0-9999min/h Shelves NO. (pc): 2 Display: LCD Power Supply: 220V±10% 50/60Hz or 110V±10% Gross Weight(kg): 40-45, with instructional/laboratory manual</p>	1	84,000.00	84,000.00

			With manufacturer's warranty With ISO 17025 Certification			
	16.	unit	<p>MACHINERY AND EQUIPMENT, Moisture Analyzer (multi-crop): Input voltage: 230 V AC 50 Hz Weighing capacity (Max): Maximum humidity: 80% Maximum operating temperature: 400C Maximum ambient temperature: 5 °C Minimum humidity: 5% Readability (moisture): 0.050% Tare range: 200g</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	118,000.00	118,000.00
	17.	unit	<p>MACHINERY AND EQUIPMENT, Multiparameter Water Quality Meter, Portable Type, pH Range -2.000-20.000pH Resolution 0001,0.01,0.1pH, selectable Accuracy 0.002pH Calibration Points 1 to 5 points pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range ±1999.9mV Resolution 0.1, 1mV, selectable Accuracy ±0.2mV Calibration Points 1 point Ion Range 0.001~19999 (depending on the range of ISE) Resolution 0.001, 0.01, 0.1, 1 Accuracy ±0.5% F.S. (monovalent), ±1% F.S. (divalent) Measurement Units ppm, mg/L, mol/L, mmol/L Calibration Points 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000) Conductivity Range 0.01~20.00, 200.0, 2000µS/cm, 20.00, 200.0mS/cm Resolution 0001,0.01,0.1,1 Accuracy ±0.5% F.S. Calibration Points 1 to 5 points Calibration Solutions 10µS/cm, 84µS/cm, 1413µS/cm, 12.88mS/cm, 111.8mS/cm Temperature Coefficient Linear(0.0- 10.0%/°C). pure water</p>	2	65,000.00	130,000.00

			<p>Reference Temperature 20/25°C Cell Constant K=0.1, 1, 10 or custom TDS Range 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt Resolution 001,0.1,1 Accuracy ±1% F.S. TDS Factor 0.1~1.0 (default 0.5) Salinity Range 0.00~42.00psu, 0.00~80.00ppt Resolution 0.01 Accuracy ±1% F.S. Resistivity Range 0.00~20.00M? Resolution 0.01 Accuracy ±1% F.S. DO Range 0.00~20.00mg/L, 0.0~200.0% saturation Resolution 001mg/L,0.1% Accuracy ±0.2mg/L, ±2.0% Calibration Points 1 or 2 points</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>			
	18.	unit	<p>MACHINERY AND EQUIPMENT, NIR Spectrometer price analyzer (portable spectrometer) "</p> <p>Wavelength Range: 350-950 Stray light: 0.3% Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~100,000K Frequency range: 25-1KHz Chromaticity coordinate accuracy: ±0.0025 Application: Agricultural Light source Frequency sampling rate: 1-10KHz</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	230,000.00	230,000.00
	19.	unit	<p>MACHINERY AND EQUIPMENT, One Set Tersus Oscar Basic (One Base and One Rover) Multi-Frequency GNSS Receiver for Static, RTK AND PPK Application GNSS BOARD: GNSS BOARD ORIGINALLY DESIGNED AND MANUFACTURED BY THE SAME BRAND. APPLICATION: With static, post Processed and real time kinematic. Display : NO DIGITAL DISPLAY Satellite</p>	2	650,000.00	1,300,000.00

			<p>Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS</p> <p>ACCURACY: MINIMUM High-Precision Static (RMS)</p> <p>Horizontal 2.5mm+0.1ppm</p> <p>Vertical 3.5mm+0.4ppm Static & Fast Static (RMS) Horizontal 2.5 mm + 0.5 ppm Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS) Horizontal 8 mm + 1 ppm Vertical 15 mm + 1 ppm Post Processed Kinematic (RMS)</p> <p>Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP) Battery operation must be 16hours with two batteries with led light indicator in battery for charge status</p> <p>MUST BE NTC TYPE APPROVED</p> <p>MUST BE A DIRECT DISTRIBUTOR (EXCLUSIVE) SOFTWARE</p> <p>1. CAN BE INSTALLED IN ANDROID PHONES, TABLET OR ANY ANDROID GADGETS</p> <p>2. FREE AND DOWNLOADABLE AT ANYTIME</p> <p>3. CONTROLLER SOFTWARE MUST HAVE DATAQUALITY CONTROL LIKE CONFIGURING ONLY THE ALLOWABLE TOLERABLE ERROR.</p> <p>4. tripod included</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>			
	20.	unit	<p>MACHINERY AND EQUIPMENT, Portable Biogas Analyzer</p> <p>"Gases detected CH₄, CO₂, H₂S, O₂</p> <p>Measuring range CH₄: (0-100)%vol CO₂: (0-100)%vol</p> <p>H₂S: (0~1000) ppm</p> <p>O₂: (0~30.0)%vol</p> <p>Resolution ratio CH₄: 1%vol, CO₂: 1%vol, H₂S: 1ppm, O₂: 0.1%vol</p>	1	118,000.00	118,000.00

			<p>Sensor Infrared sensor and electrochemical sensor Sensor lifetime: 5years(CH4, CO2) 2years(H2S, O2) Response time CH4: 45S (T90) CO2: 45s (T90) H2S: 45s (T90) O2: 45s (T90) Alarms Audible--buzzer with 80dB audible Visible--flashing red LED, 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals) Continuous working time is 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours Dust and water resistance IP65</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>			
	21.	unit	<p>MACHINERY AND EQUIPMENT, Water Activity Meter "</p> <p>Measurement range: 0.1 to: 0.98 Aw (5°C - 45°C) Measuring principle: Electrolytic (surface IR and NTC) Measurement accuracy: AW ±0.01 (±15) precision: ±0.003aw within the adjustment range (±0.1°C) Resolution: 0.001aw (0.1°C) Accuracy: ±0.010aw within calibration range (±0.15°C)</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	230,000.00	230,000.00
20.2	[List here any licenses and permits relevant to the Project and the corresponding law requiring it.]					
21.2	[List here any additional contract documents relevant to the Project that may be required by existing laws and/or the Procuring Entity.]					

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

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

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

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

1. Scope of Contract

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

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

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

2. Advance Payment and Terms of Payment

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

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

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

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

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

3. Performance Security

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

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

4. Inspection and Tests

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

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

5. Warranty

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

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

6. Liability of the Supplier

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

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

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

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

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

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

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

Special Conditions of Contract

GCC Clause	
1	<p><i>[List here any additional requirements for the completion of this Contract. The following requirements and the corresponding provisions may be deleted, amended, or retained depending on its applicability to this Contract:]</i></p> <p>Delivery and Documents –</p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p><i>[For Goods supplied from abroad, state:]</i> “The delivery terms applicable to the Contract are DDP delivered <i>[indicate place of destination]</i>. In accordance with INCOTERMS.”</p> <p><i>[For Goods supplied from within the Philippines, state:]</i> “The delivery terms applicable to this Contract are delivered <i>[indicate place of destination]</i>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <p>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is <i>Ms. Divina DC. Pinaroc</i>.</p> <p>Incidental Services –</p> <p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements: <i>Select appropriate requirements and delete the rest.</i></p> <ol style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

	<p>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.</p> <p>f. <i>[Specify additional incidental service requirements, as needed.]</i></p> <p>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.</p> <p>Spare Parts –</p> <p>The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:</p> <p><i>Select appropriate requirements and delete the rest.</i></p> <p>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</p> <p>b. in the event of termination of production of the spare parts:</p> <p>i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and</p> <p>ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.</p> <p>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.</p> <p>The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of <i>[indicate here the time period specified. If not used indicate a time period of three times the warranty period]</i>.</p> <p>Spare parts or components shall be supplied as promptly as possible, but in any case, within <i>[insert appropriate time period]</i> months of placing the order.</p>
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	<p>Packaging –</p> <p>The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.</p> <p>The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity Name of the Supplier Contract Description Final Destination Gross weight Any special lifting instructions Any special handling instructions Any relevant HAZCHEM classifications</p>
	<p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p> <p>Transportation –</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>Intellectual Property Rights –</p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
2.2	<p><i>[If partial payment is allowed, state]</i> “The terms of payment shall be as follows: _____.”</p> <p>Not applicable</p>
4	<p>The inspections and tests that will be conducted are: Quality and functional ICT Equipment. <i>Complete and conforms to the technical specifications.</i></p>

Section VI. Schedule of Requirements

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

Item No	Unit	Particulars	Qty	Delivered, Weeks/Months
1.	Unit	LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level -98 dBm / Hz at 10KHz offset phase noise Built-in switchable preamplifier 1 Hz minimum RBW All digital IF technology 256 5mm (1024 x 600) display 0 to +50 °C operating temperature USB host: USB-A 2.0+ USB LAN: 10/100 Base, RJ45 Source: 100-240 VAC, 60Hz Internal storage: 256MB EMC: EN 61326-1:2013 Electrical Safety: EN 61010-1:2010 With manufacturer's warranty With ISO 17025 Certification	1	60 Calendar Days
2.	Set	LABORATORY EQUIPMENT, Conveyor Belt Kit for Intelligent Robotic Arm - General Specs: Payload: 500 g Effective Delivering Distance: 600 mm Maximum Speed: 120 mm/s Maximum Acceleration 1100 mm/s ² Net Weight: 4.2 Kg Weight: (Including Packing) 5.34 Kg Dimension: 700 mm x 215 mm x 60 mm Distance Measuring Sensor Unit Specs: Measurable Range: 20 ~ 150 mm Signal Analog Output Input: 4.5 ~ 5.5 V Color Recognizing Sensor Unit Specs: Input: 3 ~ V	1	

		<p>Detectable: Non-glowing object White LED: Embedded, on/off controllable</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>		
3.	Set	<p>LABORATORY EQUIPMENT, Desktop for Intelligent Robotic Arm -</p> <p>Processor: 13th Gen i7 RAM: 16GRAM External Graphics Card: 12GB Storage: 512GB SSD Monitor: 23-25in Operating System: Windows 11 Warranty: 1yr. Note: Computer brand must be more than 15 years in the industry Free training/Installation and testing and training of employees/faculty members in the use of the above items. Calibration of all the items/ Installation and testing and training</p> <p>Manufactured under ISO 9001-2015 With manufacturer's warranty</p>	2	
4.		<p>LABORATORY EQUIPMENT, Intelligent Robotics Arm Educational Version</p> <p>General Specs:</p> <p>Number of Axis: 4 Payload: 500 g Max. Reach: 320mm Position: Repeatability (Control): 0.2 mm Communication: USB / Wi-Fi / Bluetooth Power Supply: 100V - 240V, 50/60 HZ? Power In: 12V / 6.5A DC Consumption: 78W Max Working Temperature: -10° - 60° C Axis Movement (Range and Speed): Axis: Range / Max Speed (250 g workload)</p>	2	

		<p>Joint 1: (Base) -120° ~+120° / 320° / s</p> <p>Joint 2: (Rear Arm) -5°~+90°320°/ s</p> <p>Joint 3: (Forearm) - 15°~+90°320° / s</p> <p>Joint 4: (Rotation Servo) - 140°~+140°480° / s End Effectors:</p> <p>1 set 3D Printer Kit</p> <p>Maximum Print Size: 150mm×150mm×150mm</p> <p>3D Printing Material: PLA Resolution: 0.1 mm</p> <p>1 set Laser Engraver</p> <p>Power Consumption: 500 mw Type: 405 nm (Blue Laser)</p> <p>Power: 12 V, TTL trigger (With PWM Driver)</p> <p>1 set Pen Holder</p> <p>Pen Diameter: 10 mm</p> <p>1 set Vacuum Suction Cup Suction Cup</p> <p>Diameter: 20 mm Pressure: -35 Kpa</p> <p>1 sets Gripper</p> <p>Range: 27.5 mm</p> <p>Drive Type: Pneumatic Force: 8N</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>		
5.	Set	<p>LABORATORY EQUIPMENT, Linear Rail Kit for Intelligent Robotic Arm -</p> <p>General Specs:</p> <p>Payload: 5 kg</p> <p>Effective Travel Distance: 1000 mm</p> <p>Maximum: Speed</p> <p>150 mm/s Maximum Acceleration: 150 mm/s² Repeat Positioning Accuracy: 0.01 mm Absolute Positioning Accuracy: 0.25 mm Net Weight: 4.7 kg Weight: 7.23 kg</p> <p>Dimension: (Length x Width x Height)</p> <p>1320 mm x 120 mm x 55 mm</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>	1	
6.	Set	<p>LABORATORY EQUIPMENT, Local Area Network (LAN) Trainer-</p> <p>Technical Specifications Hardware:</p> <p>PC to PC using RJ-45 connector</p>	1	

		<p>Star topology Bus topology Ring topology Data transmission speed: 10/100 Mbps</p> <p>Software: Star, Bus, Ring selection Protocols: CSMA/CD, CSMA/CA, Token ring, Token Bus Complete analysis of Network and Protocols Error generations Packet size: 128, 256, 512, or higher</p> <p>Training Content: Addressing in TC/IP Ping Command Implementation to PC to PC Implementation of Peer-to-Peer network Implementation of Client-Server Network Implementation of Wireless LAN protocols Implementation of CRC technique</p> <p>Accessories included: RJ45 -RJ45 connector cable USB dongle DB9 connectors cable END terminator Patch cords Mains cord</p> <p>Computer Set Minimum i3 processor 13th generation Windows 7, Hard drive: 1TB SSD RAM: 16 GB Monitor Size: 19" Monitor 3-year warranty With ISO 17025 Certification</p>		
7.	Bundle	<p>LABORATORY EQUIPMENT, Microcontroller -Starter Learning Kit (Complete Laboratory</p>	1	

		<p>Equipment Set, (1 bundle=10 sets) General Specs:</p> <p>Prototyping Shield</p> <p>Jumper Cables M/M x 30</p> <p>Jumper cables F/M x 10</p> <p>Resistor 220 R x 20</p> <p>Resistor 4.7 K x 20</p> <p>Resistor 10K x 20</p> <p>Resistor 1K x 20</p> <p>5 mm LED x 10</p> <p>IR Receiver Diode x 1</p> <p>Mini-push Button x 4</p> <p>Ambient light sensor x 1</p> <p>Tilt switch sensor x 1</p> <p>8-segment LED x 1</p> <p>LM35 temperature sensor x 1</p> <p>Relay x 1</p> <p>Buzzer x 1</p> <p>Fan x 1</p> <p>130 Motor x 1</p> <p>10K Potentiometer x 3</p> <p>Micro Servo x 1</p> <p>Mini control x1</p> <p>6 AA Battery Holder x 1</p> <p>400 tie point interlocking solderless breadboard x 1</p> <p>Training Content:</p> <p>Blinking LED</p> <p>SOS beacon</p> <p>Traffic light</p> <p>Fading light</p> <p>RGB LED</p> <p>Alarm</p> <p>Temperature alarm</p> <p>Detecting vibration</p> <p>Auto Light</p> <p>Moving servo</p> <p>Interact with servo</p> <p>RGB Light dimmer</p> <p>Motor fan</p> <p>Infrared controlled light</p> <p>Infrared controlled LED matrix</p>		
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		With manufacturer's warranty With ISO 17025 Certification		
8.	Set	<p>LABORATORY EQUIPMENT, Multiple PLC Systems</p> <p>Trainer (3 different PLC) -</p> <p>General Specs:</p> <p>Compact type PLC training system</p> <p>Eight digital inputs</p> <p>Six digital outputs</p> <p>Six analog inputs</p> <p>Two analog outputs</p> <p>Can be connect and control SCADA</p> <p>Can be connect and control HMI</p> <p>Ladder simulation</p> <p>Analog and Digital sensor compatibility</p> <p>Technical Specifications:</p> <p>Eight digital inputs</p> <p>Six digital outputs</p> <p>Six Analog input</p> <p>Two analog outputs</p> <p>RS232 compatible</p> <p>RS485 compatible</p> <p>24 Volts DC input</p> <p>Seven push button switches</p> <p>Two relays</p> <p>One DC motor</p> <p>Three pilot lights</p> <p>One photoelectric sensor 12V DC, NPN, 5mm, 1 KHz</p> <p>One photoelectric Sensor with Mirror feedback, 24 VDC, NC, NO</p> <p>Power: 220 Volts input/ 24V DC output/ 5 Amp</p> <p>Training Content:</p> <p>Emergency stop training</p> <p>Push On and Off Training</p> <p>Traffic light Control Training</p> <p>Relay Control Training</p> <p>Motor Control Training</p> <p>Sensor Control Training</p>	1	

		<p>Analog input and output Control Training Counter Control Training Timer Control Training SCADA Interface Training</p> <p>PLC Programming Training Accessories</p> <p>included:</p> <p>Communication Cable 30 pcs connecting cables Power Cables PLC programming Software</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>		
9.	Set	<p>LABORATORY EQUIPMENT, Vision System Kit for Intelligent Robotic Arm -</p> <p>General Specs: Focus: 60mm Lens Diameter: Focal Length: 1:14 Maximal Length size: 8.8mm x 6.6mm Aperture: F1.4- F16C</p> <p>Aperture and Focus Point Control: Manual With HD Color Industrial Camera Sensor Size: ½ CMOS Effective Pixel: at least 3Million Shutter Type: Curtain Exposure Exposure Control: Manual & Auto With USB data interface With White Auxiliary Light Source Luminous Color: White Illumination: 40000 lux Output Voltage 12V DC Output Power: 5-35W Operating Distance: 35-110mm</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	
10.	Unit	<p>MACHINERY AND EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument Heat capacity: About 10500 J / K Oxygen bomb capacity: 300ml Oxygen charging</p>	1	

		pressure: 2.8 ~ 3.2 MPa Pressure resistance: water pressure 20MPa Weight: 2.5 kg Overall dimension: 650 * 450 * 500 mm Temperature range: 0 ~ 40 °C Response time: < 4 S Resolution: 0.0001 Linearity: < 0.08% per 5 oC temperature rise range Temperature measurement error: ± 0.003 Power supply voltage: AC220V ± 10% Humidity: up to 80% Power: 30W Ignition voltage: AC24 V Ignition time: 5S With manufacturer's warranty With ISO 17025 Certification		
11.	Unit	MACHINERY AND EQUIPMENT, Brake dynamometer Power range: 10-20 hp Max RPM: 2000 rpm Max Torque: 400 Nm With manufacturer's warranty With ISO 17025 Certification	1	
12.	Unit	MACHINERY AND EQUIPMENT, Diesel engine with common rail intercooler Educational Trainer 4 stroke engine; 4 in- line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration- damping balancing shafts Common rail-type direct injection with electro-injectors Turbo- supercharger with air-air intercooler Alternator-oil filter-oil pump	1	
13.	Unit	MACHINERY AND EQUIPMENT, Gasoline engine with common rail Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration- damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air to air intercooler Alternator-oil filter-oil pump With manufacturer's warranty With ISO 17025 Certification	1	
14.	Unit	MACHINERY AND EQUIPMENT, Lab Mill/Husker Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr	1	

		Power: 400 W (0.5 hp) single phase Head Power: 1,900 RPM Follow power: 1,000 RPM Size: 720x 480 x 1400 mm Weight: 49kg Power source: 220 V, 60 hz With manufacturer's warranty With ISO 17025 Certification		
15.	Unit	MACHINERY AND EQUIPMENT, Laboratory Oven (Forced Air-Drying Oven) Capacity: 54L Temp. Range: RT+10°C~300°C Temp. Precision: 0.1°C Temp. Uniformity: ≤Max Temp.±2.5% Circulation Mode: Back heating, forced convection Timing Range: 0-9999min/h Shelves NO. (pc): 2 Display: LCD Power Supply: 220V±10% 50/60Hz or 110V±10% Gross Weight(kg): 40-45, with instructional/laboratory manual With manufacturer's warranty With ISO 17025 Certification	1	
16.	Unit	MACHINERY AND EQUIPMENT, Moisture Analyzer (multi-crop): Input voltage: 230 V AC 50 Hz Weighing capacity (Max): Maximum humidity: 80% Maximum operating temperature: 400C Maximum ambient temperature: 5 °C Minimum humidity: 5% Readability (moisture): 0.050% Tare range: 200g With manufacturer's warranty With ISO 17025 Certification	1	
17.	Unit	MACHINERY AND EQUIPMENT, Multiparameter Water Quality Meter, Portable Type, pH Range -2.000-20.000pH Resolution 0001,0.01,0.1pH, selectable Accuracy 0.002pH Calibration Points 1 to 5 points pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range ±1999.9mV Resolution 0.1, 1mV, selectable Accuracy ±0.2mV Calibration Points 1 point Ion Range 0.001~19999 (depending on the range of ISE) Resolution 0.001, 0.01, 0.1, 1 Accuracy ±0.5% F.S. (monovalent), ±1% F.S. (divalent) Measurement Units ppm, mg/L, mol/L,	2	

		<p>mmol/L Calibration Points 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000) Conductivity Range 0.01~20.00, 200.0, 2000µS/cm, 20.00, 200.0mS/cm Resolution 0001,0.01,0.1,1 Accuracy ±0.5% F.S. Calibration Points 1 to 5 points Calibration Solutions 10µS/cm, 84µS/cm, 1413µS/cm, 12.88mS/cm, 111.8mS/cm Temperature Coefficient Linear(0.0-10.0%/°C). pure water Reference Temperature 20/25°C Cell Constant K=0.1, 1, 10 or custom TDS Range 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt Resolution 001,0.1,1 Accuracy ±1% F.S. TDS Factor 0.1~1.0 (default 0.5) Salinity Range 0.00~42.00psu, 0.00~80.00ppt Resolution 0.01 Accuracy ±1% F.S. Resistivity Range 0.00~20.00M? Resolution 0.01 Accuracy ±1% F.S. DO Range 0.00~20.00mg/L, 0.0~200.0% saturation Resolution 001mg/L,0.1% Accuracy ±0.2mg/L, ±2.0% Calibration Points 1 or 2 points</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>		
18.	Unit	<p>MACHINERY AND EQUIPMENT, NIR Spectrometer price analyzer (portable spectrometer) "</p> <p>Wavelength Range: 350-950 Stray light: 0.3% Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~ 100,000K Frequency range: 25-1KHz Chromaticity coordinate accuracy: ±0.0025 Application: Agricultural Light source Frequency sampling rate: 1-10KHz</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	
19.	Unit	<p>MACHINERY AND EQUIPMENT, One Set Tersus Oscar Basic (One Base and One Rover) Multi-Frequency GNSS Receiver for Static, RTK AND PPK Application GNSS BOARD: GNSS BOARD ORIGINALLY DESIGNED AND MANUFACTURED BY THE SAME BRAND. APPLICATION: With static, post Processed and real time kinematic. Display : NO DIGITAL DISPLAY Satellite Tracking: GPS, GLONASS,BEIDOU AND GALILEO, QZSS, SBAS ACCURACY: MINIMUM High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm Vertical 3.5mm+0.4ppm Static & Fast Static</p>	2	

		(RMS) Horizontal 2.5 mm + 0.5 ppm Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS) Horizontal 8 mm + 1 ppm Vertical 15 mm + 1 ppm Post Processed Kinematic (RMS) Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP) Battery operation must be 16hours with two batteries with led light indicator in battery for charge status MUST BE NTC TYPE APPROVED MUST BE A DIRECT DISTRIBUTOR (EXCLUSIVE) SOFTWARE 1. CAN BE INSTALLED IN ANDROID PHONES, TABLET OR ANY ANDROID GADGETS 2. FREE AND DOWNLOADABLE AT ANYTIME 3. CONTROLLER SOFTWARE MUST HAVE DATAQUALITY CONTROL LIKE CONFIGURING ONLY THE ALLOWABLE TOLERABLE ERROR. 4. tripod included With manufacturer's warranty With ISO 17025 Certification		
20.	Unit	MACHINERY AND EQUIPMENT, Portable Biogas Analyzer "Gases detected CH ₄ , CO ₂ , H ₂ S, O ₂ Measuring range CH ₄ : (0-100)%vol CO ₂ : (0-100)%vol H ₂ S: (0~1000) ppm O ₂ : (0~30.0)%vol Resolution ratio CH ₄ : 1%vol, CO ₂ : 1%vol, H ₂ S: 1ppm, O ₂ : 0.1%vol Sensor Infrared sensor and electrochemical sensor Sensor lifetime: 5years(CH ₄ , CO ₂) 2years(H ₂ S, O ₂) Response time CH ₄ : 45S (T ₉₀) CO ₂ : 45s (T ₉₀) H ₂ S: 45s (T ₉₀) O ₂ : 45s (T ₉₀) Alarms Audible--buzzer with 80dB audible Visible--flashing red LED, 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals) Continuous working time is 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA	1	

		Charging time 4-5 hours Dust and water resistance IP65 With manufacturer's warranty With ISO 17025 Certification		
21.	Unit	MACHINERY AND EQUIPMENT, Water Activity Meter " Measurement range: 0.1 to: 0.98 Aw (5°C - 45°C) Measuring principle: Electrolytic (surface IR and NTC) Measurement accuracy: AW ± 0.01 (± 15) precision: ± 0.003 aw within the adjustment range ($\pm 0.1^\circ\text{C}$) Resolution: 0.001aw (0.1°C) Accuracy: ± 0.010 aw within calibration range ($\pm 0.15^\circ\text{C}$) With manufacturer's warranty With ISO 17025 Certification	1	

[Use this form for Framework Agreement:]

Framework Agreement List

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

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

<i>FRAMEWORK AGREEMENT LIST (AGENCY)</i>				
<i>Item / Service Type and nature of each item/service</i>		<i>Cost per item or service</i>	<i>Maximum Quantity</i>	<i>Total Cost per Item</i>
<i>TOTAL (Approved Budget for the Contract)</i>				
<i>Expected delivery timeframe after receipt of a Call-Off.</i>		<i>Within [no. of days] calendar days upon issuance of Call-off.</i>		

<i>Remarks</i>	<i>Indicate here any other appropriate information as may be necessary.</i>	
<i>SIGNATURE OVER PRINTED NAME</i>	<i>POSITION</i>	<i>DEPARTMENT/DIVISION</i>

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

	Specification	Statement of Compliance
		<p><i>[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each</i></p> <p><i>Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder’s statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i></p>
1.	LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level -98 dBm / Hz at 10KHz offset phase noise Built-in switchable preamplifier I Hz minimum RBW	

	<p>All digital IF technology 256 5mm (1024 x 600) display 0 to +50 °C operating temperature USB host: USB-A 2.0+ USB LAN: 10/100 Base, RJ45 Source: 100-240 VAC, 60Hz Internal storage: 256MB EMC: EN 61326-1:2013 Electrical Safety: EN 61010-1:2010</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
2.	<p>LABORATORY EQUIPMENT, Conveyor Belt Kit for Intelligent Robotic Arm - General Specs:</p> <p>Payload: 500 g Effective Delivering Distance: 600 mm Maximum Speed: 120 mm/s Maximum Acceleration 1100 mm/s² Net Weight: 4.2 Kg Weight: (Including Packing) 5.34 Kg Dimension: 700 mm x 215 mm x 60 mm Distance Measuring Sensor Unit Specs: Measurable Range: 20 ~ 150 mm Signal Analog Output Input: 4.5 ~ 5.5 V Color Recognizing Sensor Unit Specs: Input: 3 ~ V Detectable: Non-glowing object White LED: Embedded, on/off controllable</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
3.	<p>LABORATORY EQUIPMENT, Desktop for Intelligent Robotic Arm -</p> <p>Processor: 13th Gen i7 RAM: 16GRAM External Graphics Card: 12GB Storage: 512GB SSD Monitor: 23-25in Operating System: Windows 11 Warranty: 1yr. Note: Computer brand must be more than 15 years in</p>	

	<p>the industry</p> <p>Free training/Installation and testing and training of employees/faculty members in the use of the above items.</p> <p>Calibration of all the items/ Installation and testing and training</p> <p>Manufactured under ISO 9001-2015 With manufacturer's warranty</p>	
4.	<p>LABORATORY EQUIPMENT, Intelligent Robotics Arm</p> <p>Educational Version</p> <p>General Specs:</p> <p>Number of Axis: 4</p> <p>Payload: 500 g Max.</p> <p>Reach: 320mm</p> <p>Position:</p> <p>Repeatability (Control): 0.2 mm</p> <p>Communication: USB / Wi-Fi / Bluetooth</p> <p>Power Supply: 100V - 240V, 50/60 HZ?</p> <p>Power In: 12V / 6.5A DC</p> <p>Consumption: 78W Max</p> <p>Working Temperature: -10° - 60° C</p> <p>Axis Movement (Range and Speed):</p> <p>Axis: Range / Max Speed (250 g workload)</p> <p>Joint 1: (Base) -120° ~+120° / 320° / s</p> <p>Joint 2: (Rear Arm) -5°~+90°320° / s</p> <p>Joint 3: (Forearm) - 15°~+90°320° / s</p> <p>Joint 4: (Rotation Servo) - 140°~+140°480° / s</p> <p>End Effectors:</p> <p>1 set 3D Printer Kit</p> <p>Maximum Print Size: 150mm×150 mm×150mm</p> <p>3D Printing Material: PLA Resolution: 0.1 mm</p> <p>1 set Laser Engraver</p> <p>Power Consumption: 500 mw Type: 405 nm (Blue Laser)</p> <p>Power: 12 V, TTL trigger (With PWM Driver)</p>	

	<p>1 set Pen Holder Pen Diameter: 10 mm 1 set Vacuum Suction Cup Suction Cup Diameter: 20 mm Pressure: -35 Kpa 1 sets Gripper Range: 27.5 mm Drive Type: Pneumatic Force: 8N</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
5.	<p>LABORATORY EQUIPMENT, Linear Rail Kit for Intelligent Robotic Arm - General Specs: Payload: 5 kg Effective Travel Distance: 1000 mm Maximum: Speed 150 mm/s Maximum Acceleration: 150 mm/s² Repeat Positioning Accuracy: 0.01 mm Absolute Positioning Accuracy: 0.25 mm Net Weight: 4.7 kg Weight: 7.23 kg Dimension: (Length x Width x Height) 1320 mm x 120 mm x 55 mm</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
6.	<p>LABORATORY EQUIPMENT, Local Area Network (LAN) Trainer- Technical Specifications Hardware: PC to PC using RJ-45 connector Star topology Bus topology Ring topology Data transmission speed: 10/100 Mbps</p> <p>Software: Star, Bus, Ring selection Protocols: CSMA/CD, CSMA/CA, Token ring, Token Bus Complete analysis of Network and Protocols</p>	

	<p>Error generations Packet size: 128, 256, 512, or higher</p> <p>Training Content: Addressing in TC/IP Ping Command Implementation to PC to PC Implementation of Peer-to-Peer network Implementation of Client-Server Network Implementation of Wireless LAN protocols Implementation of CRC technique</p> <p>Accessories included: RJ45 -RJ45 connector cable USB dongle DB9 connectors cable END terminator Patch cords Mains cord</p> <p>Computer Set Minimum i3 processor 13th generation Windows 7, Hard drive: 1TB SSD RAM: 16 GB Monitor Size: 19" Monitor 3-year warranty With ISO 17025 Certification</p>	
7.	<p>LABORATORY EQUIPMENT, Microcontroller -Starter Learning Kit (Complete Laboratory Equipment Set, (1 bundle=10 sets) General Specs:</p> <p>Prototyping Shield Jumper Cables M/M x 30 Jumper cables F/M x 10 Resistor 220 R x 20 Resistor 4.7 K x 20 Resistor 10K x 20 Resistor 1K x 20 5 mm LED x 10 IR Receiver Diode x 1 Mini-push Button x 4</p>	

	<p> Ambient light sensor x 1 Tilt switch sensor x 1 8-segment LED x 1 LM35 temperature sensor x 1 Relay x 1 Buzzer x 1 Fan x 1 130 Motor x 1 10K Potentiometer x 3 Micro Servo x 1 Mini control x1 6 AA Battery Holder x 1 400 tie point interlocking solderless breadboard x 1 Training Content: Blinking LED SOS beacon Traffic light Fading light RGB LED Alarm Temperature alarm Detecting vibration Auto Light Moving servo Interact with servo RGB Light dimmer Motor fan Infrared controlled light Infrared controlled LED matrix With manufacturer's warranty With ISO 17025 Certification </p>	
8.	<p> LABORATORY EQUIPMENT, Multiple PLC Systems Trainer (3 different PLC) - General Specs: Compact type PLC training system Eight digital inputs Six digital outputs Six analog inputs Two analog outputs Can be connect and control SCADA Can be connect and control HMI </p>	

	<p>Ladder simulation</p> <p>Analog and Digital sensor compatibility</p> <p>Technical Specifications:</p> <p>Eight digital inputs</p> <p>Six digital outputs</p> <p>Six Analog input</p> <p>Two analog outputs</p> <p>RS232 compatible</p> <p>RS485 compatible</p> <p>24 Volts DC input</p> <p>Seven push button switches</p> <p>Two relays</p> <p>One DC motor</p> <p>Three pilot lights</p> <p>One photoelectric sensor 12V DC, NPN, 5mm, 1 KHz</p> <p>One photoelectric Sensor with Mirror feedback, 24 VDC, NC, NO</p> <p>Power: 220 Volts input/ 24V DC output/ 5 Amp</p> <p>Training Content:</p> <p>Emergency stop training</p> <p>Push On and Off Training</p> <p>Traffic light Control Training</p> <p>Relay Control Training</p> <p>Motor Control Training</p> <p>Sensor Control Training</p> <p>Analog input and output Control Training</p> <p>Counter Control Training</p> <p>Timer Control Training</p> <p>SCADA Interface</p> <p>Training PLC</p> <p>Programming</p> <p>Training Accessories</p> <p>included:</p> <p>Communication Cable</p> <p>30 pcs connecting cables</p>	
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	Power Cables PLC programming Software With manufacturer's warranty With ISO 17025 Certification	
9.	LABORATORY EQUIPMENT, Vision System Kit for Intelligent Robotic Arm - General Specs: Focus: 60mm Lens Diameter: Focal Length: 1:14 Maximal Length size: 8.8mm x 6.6mm Aperture: F1.4-F16C Aperture and Focus Point Control: Manual With HD Color Industrial Camera Sensor Size: ½ CMOS Effective Pixel: at least 3Million Shutter Type: Curtain Exposure Exposure Control: Manual & Auto With USB data interface With White Auxiliary Light Source Luminous Color: White Illumination: 40000 lux Output Voltage 12V DC Output Power: 5-35W Operating Distance: 35-110mm With manufacturer's warranty With ISO 17025 Certification	
10.	MACHINERY AND EQUIPMENT, Automatic Bomb Calorimeter Calorific Value Test Meter Machine Instrument Heat capacity: About 10500 J / K Oxygen bomb capacity: 300ml Oxygen charging pressure: 2.8 ~ 3.2 MPa Pressure resistance: water pressure 20MPa Weight: 2.5 kg Overall dimension: 650 * 450 * 500 mm Temperature range: 0 ~ 40 °C Response time: < 4 S Resolution: 0.0001 Linearity: < 0.08% per 5 oC temperature rise range Temperature measurement error: ± 0.003 Power supply voltage: AC220V ± 10% Humidity: up to 80% Power: 30W Ignition voltage: AC24 V Ignition time: 5S	

	With manufacturer's warranty With ISO 17025 Certification	
11.	MACHINERY AND EQUIPMENT, Brake dynamometer Power range: 10-20 hp Max RPM: 2000 rpm Max Torque: 400 Nm With manufacturer's warranty With ISO 17025 Certification	
12.	MACHINERY AND EQUIPMENT, Diesel engine with common rail intercooler Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air-air intercooler Alternator-oil filter-oil pump	
13.	MACHINERY AND EQUIPMENT, Gasoline engine with common rail Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air to air intercooler Alternator-oil filter-oil pump With manufacturer's warranty With ISO 17025 Certification	
14.	MACHINERY AND EQUIPMENT, Lab Mill/Husker Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr Power: 400 W (0.5 hp) single phase Head Power: 1,900 RPM Follow power: 1,000 RPM Size: 720x 480 x 1400 mm Weight: 49kg Power source: 220 V, 60 hz With manufacturer's warranty With ISO 17025 Certification	

15.	<p>MACHINERY AND EQUIPMENT, Laboratory Oven (Forced Air-Drying Oven) Capacity: 54L Temp. Range: RT+10°C~300°C Temp. Precision: 0.1°C Temp. Uniformity: ≤Max Temp.±2.5% Circulation Mode: Back heating, forced convection Timing Range: 0-9999min/h Shelves NO. (pc): 2 Display: LCD Power Supply: 220V±10% 50/60Hz or 110V±10% Gross Weight(kg): 40-45, with instructional/laboratory manual</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
16.	<p>MACHINERY AND EQUIPMENT, Moisture Analyzer (multi-crop): Input voltage: 230 V AC 50 Hz Weighing capacity (Max): Maximum humidity: 80% Maximum operating temperature: 400C Maximum ambient temperature: 5 °C Minimum humidity: 5% Readability (moisture): 0.050% Tare range: 200g</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
17.	<p>MACHINERY AND EQUIPMENT, Multiparameter Water Quality Meter, Portable Type, pH Range -2.000-20.000pH Resolution 0001,0.01,0.1pH, selectable Accuracy 0.002pH Calibration Points 1 to 5 points pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range ±1999.9mV Resolution 0.1, 1mV, selectable Accuracy ±0.2mV Calibration Points 1 point Ion Range 0.001~19999 (depending on the range of ISE) Resolution 0.001, 0.01, 0.1, 1 Accuracy ±0.5% F.S. (monovalent), ±1% F.S. (divalent) Measurement Units ppm, mg/L, mol/L, mmol/L Calibration Points 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000) Conductivity Range 0.01~20.00, 200.0, 2000µS/cm, 20.00, 200.0mS/cm Resolution 0001,0.01,0.1,1 Accuracy ±0.5% F.S. Calibration Points 1 to 5 points Calibration Solutions 10µS/cm, 84µS/cm, 1413µS/cm,</p>	

	<p>12.88mS/cm, 111.8mS/cm Temperature Coefficient Linear(0.0-10.0%/°C). pure water Reference Temperature 20/25°C Cell Constant K=0.1, 1, 10 or custom TDS Range 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt Resolution 001,0.1,1 Accuracy ±1% F.S. TDS Factor 0.1~1.0 (default 0.5) Salinity Range 0.00~42.00psu, 0.00~80.00ppt Resolution 0.01 Accuracy ±1% F.S. Resistivity Range 0.00~20.00M? Resolution 0.01 Accuracy ±1% F.S. DO Range 0.00~20.00mg/L, 0.0~200.0% saturation Resolution 001mg/L,0.1% Accuracy ±0.2mg/L, ±2.0% Calibration Points 1 or 2 points</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
18.	<p>MACHINERY AND EQUIPMENT, NIR Spectrometer price analyzer (portable spectrometer) "</p> <p>Wavelength Range: 350-950 Stray light: 0.3% Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~ 100,000K Frequency range: 25-1KHz Chromaticity coordinate accuracy: ±0.0025 Application: Agricultural Light source Frequency sampling rate: 1-10KHz</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
19.	<p>MACHINERY AND EQUIPMENT, One Set Tersus Oscar Basic (One Base and One Rover) Multi-Frequency GNSS Receiver for Static, RTK AND PPK Application GNSS BOARD: GNSS BOARD ORIGINALLY DESIGNED AND MANUFACTURED BY THE SAME BRAND. APPLICATION: With static, post Processed and real time kinematic. Display : NO DIGITAL DISPLAY Satellite Tracking: GPS, GLONASS,BEIDOU AND GALILEO, QZSS, SBAS ACCURACY: MINIMUM High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm Vertical 3.5mm+0.4ppm Static & Fast Static (RMS) Horizontal 2.5 mm + 0.5 ppm Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS) Horizontal 8 mm + 1 ppm Vertical 15 mm + 1 ppm Post Processed Kinematic (RMS)</p>	

	<p>Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP) Battery operation must be 16hours with two batteries with led light indicator in battery for charge status MUST BE NTC TYPE APPROVED MUST BE A DIRECT DISTRIBUTOR (EXCLUSIVE) SOFTWARE 1. CAN BE INSTALLED IN ANDROID PHONES, TABLET OR ANY ANDROID GADGETS 2. FREE AND DOWNLOADABLE AT ANYTIME 3. CONTROLLER SOFTWARE MUST HAVE DATAQUALITY CONTROL LIKE CONFIGURING ONLY THE ALLOWABLE TOLERABLE ERROR. 4. tripod included</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	
20.	<p>MACHINERY AND EQUIPMENT, Portable Biogas Analyzer "Gases detected CH₄, CO₂, H₂S, O₂ Measuring range CH₄: (0-100)%vol CO₂: (0-100)%vol H₂S: (0~1000) ppm O₂: (0~30.0)%vol Resolution ratio CH₄: 1%vol, CO₂: 1%vol, H₂S: 1ppm, O₂: 0.1%vol Sensor Infrared sensor and electrochemical sensor Sensor lifetime: 5years(CH₄, CO₂) 2years(H₂S, O₂) Response time CH₄: 45S (T₉₀) CO₂: 45s (T₉₀) H₂S: 45s (T₉₀) O₂: 45s (T₉₀) Alarms Audible--buzzer with 80dB audible Visible--flashing red LED, 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals) Continuous working time is 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours Dust and water resistance IP65</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	

21.	<p>MACHINERY AND EQUIPMENT, Water Activity Meter "</p> <p>Measurement range: 0.1 to: 0.98 Aw (5°C - 45°C)</p> <p>Measuring principle: Electrolytic (surface IR and NTC)</p> <p>Measurement accuracy: AW ± 0.01 (± 15)</p> <p>precision: ± 0.003aw within the adjustment range ($\pm 0.1^\circ\text{C}$)</p> <p>Resolution: 0.001aw (0.1°C)</p> <p>Accuracy: ± 0.010aw within calibration range ($\pm 0.15^\circ\text{C}$)</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>	
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BILL OF QUANTITIES

Name of Project	:	Project 2025-9E: Supply , Delivery, and Installation of Machinery and Laboratory Equipment of NVSU Engineering Programs.
Location	:	Bayombong and Bambang Campus
Mode of Implementation	:	Public Bidding
Source of Fund	:	Trust Fund
Number of Calendar Days to Complete	:	60 Calendar Days
Approved Budget for the Contract	:	Php5,000,000.00

Item No.	Particulars	Qty	Unit of Measurement	Unit Cost	Total Cost
1.	LABORATORY EQUIPMENT, Spectrum Analyzer – With built-in Signal Synthesizer Technical Specifications 9KHz to 2.1 GHz -161 dBm/Hz displayed average noise level -98 dBm / Hz at 10KHz offset phase noise Built-in switchable preamplifier 1 Hz minimum RBW All digital IF technology 256 5mm (1024 x 600) display 0 to +50 °C operating temperature USB host: USB-A 2.0+ USB LAN: 10/100 Base, RJ45 Source: 100-240 VAC, 60Hz Internal storage: 256MB EMC: EN 61326-1:2013 Electrical Safety: EN 61010-1:2010 With manufacturer's warranty With ISO 17025 Certification	1	Unit	206,767.00	206,767.00
2.	LABORATORY EQUIPMENT, Conveyor Belt Kit for Intelligent Robotic Arm - General Specs: Payload: 500 g Effective Delivering Distance: 600 mm Maximum Speed: 120 mm/s Maximum Acceleration 1100 mm/s ²	1	Set	90,000.00	90,000.00

	Net Weight: 4.2 Kg Weight: (Including Packing) 5.34 Kg Dimension: 700 mm x 215 mm x 60 mm Distance Measuring Sensor Unit Specs: Measurable Range: 20 ~ 150 mm Signal Analog Output Input: 4.5 ~ 5.5 V Color Recognizing Sensor Unit Specs: Input: 3 ~ V Detectable: Non-glowing object White LED: Embedded, on/off controllable With manufacturer's warranty With ISO 17025 Certification				
3.	LABORATORY EQUIPMENT, Desktop for Intelligent Robotic Arm - Processor: 13th Gen i7 RAM: 16GRAM External Graphics Card: 12GB Storage: 512GB SSD Monitor: 23-25in Operating System: Windows 11 Warranty: 1yr. Note: Computer brand must be more than 15 years in the industry Free training/Installation and testing and training of employees/faculty members in the use of the above items. Calibration of all the items/ Installation and testing and training Manufactured under ISO 9001-2015 With manufacturer's warranty	2	Set	74,000.00	148,000.00
4.	LABORATORY EQUIPMENT, Intelligent Robotics Arm Educational Version General Specs: Number of Axis: 4	2	set	228,000.00	456,000.00

	Payload: 500 g Max. Reach: 320mm Position: Repeatability (Control): 0.2 mm Communication: USB / Wi-Fi / Bluetooth Power Supply: 100V - 240V, 50/60 HZ? Power In: 12V / 6.5A DC Consumption: 78W Max Working Temperature: -10° - 60° C Axis Movement (Range and Speed): Axis: Range / Max Speed (250 g workload) Joint 1: (Base) -120° ~+120° / 320° / s Joint 2: (Rear Arm) -5°~+90°320° / s Joint 3: (Forearm) - 15°~+90°320° / s Joint 4: (Rotation Servo) - 140°~+140°480° / s End Effectors: 1 set 3D Printer Kit Maximum Print Size: 150mm×150 mm×150mm 3D Printing Material: PLA Resolution: 0.1 mm 1 set Laser Engraver Power Consumption: 500 mw Type: 405 nm (Blue Laser) Power: 12 V, TTL trigger (With PWM Driver) 1 set Pen Holder Pen Diameter: 10 mm 1 set Vacuum Suction Cup Suction Cup Diameter: 20 mm Pressure: -35 Kpa 1 sets Gripper Range: 27.5 mm Drive Type: Pneumatic Force: 8N With manufacturer's warranty With ISO 17025 Certification				
5.	LABORATORY EQUIPMENT, Linear Rail Kit for	1	Set	146,000.00	146,000.00

	<p>Intelligent Robotic Arm - General Specs:</p> <p>Payload: 5 kg</p> <p>Effective Travel Distance: 1000 mm</p> <p>Maximum: Speed 150 mm/s Maximum Acceleration: 150 mm/s² Repeat Positioning Accuracy: 0.01 mm Absolute Positioning Accuracy: 0.25 mm Net Weight: 4.7 kg Weight: 7.23 kg</p> <p>Dimension: (Length x Width x Height) 1320 mm x 120 mm x 55 mm</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>				
6.	<p>LABORATORY EQUIPMENT, Local Area Network (LAN) Trainer-</p> <p>Technical Specifications Hardware:</p> <p>PC to PC using RJ-45 connector</p> <p>Star topology</p> <p>Bus topology</p> <p>Ring topology</p> <p>Data transmission speed: 10/100 Mbps</p> <p>Software:</p> <p>Star, Bus, Ring selection</p> <p>Protocols: CSMA/CD, CSMA/CA, Token ring, Token Bus</p> <p>Complete analysis of Network and Protocols</p> <p>Error generations</p> <p>Packet size: 128, 256, 512, or higher</p> <p>Training Content:</p> <p>Addressing in TC/IP</p> <p>Ping Command</p> <p>Implementation to PC to PC</p> <p>Implementation of Peer-to-Peer network</p> <p>Implementation of Client-Server Network</p>	1	Set	374,900.00	374,900.00

	<p>Implementation of Wireless LAN protocols</p> <p>Implementation of CRC technique</p> <p>Accessories included:</p> <p>RJ45 -RJ45 connector cable</p> <p>USB dongle</p> <p>DB9 connectors cable</p> <p>END terminator</p> <p>Patch cords</p> <p>Mains cord</p> <p>Computer Set</p> <p>Minimum i3 processor 13th generation</p> <p>Windows 7, Hard drive: 1TB SSD</p> <p>RAM: 16 GB</p> <p>Monitor Size:</p> <p>19" Monitor</p> <p>3-year warranty</p> <p>With ISO 17025 Certification</p>				
7.	<p>LABORATORY EQUIPMENT,</p> <p>Microcontroller -Starter Learning Kit</p> <p>(Complete Laboratory Equipment Set,</p> <p>(1 bundle=10 sets) General Specs:</p> <p>Prototyping Shield</p> <p>Jumper Cables M/M x 30</p> <p>Jumper cables F/M x 10</p> <p>Resistor 220 R x 20</p> <p>Resistor 4.7 K x 20</p> <p>Resistor 10K x 20</p> <p>Resistor 1K x 20</p> <p>5 mm LED x 10</p> <p>IR Receiver Diode x 1</p> <p>Mini-push Button x 4</p> <p>Ambient light sensor x 1</p> <p>Tilt switch sensor x 1</p> <p>8-segment LED x 1</p> <p>LM35 temperature sensor x 1</p> <p>Relay x 1</p> <p>Buzzer x 1</p> <p>Fan x 1</p> <p>130 Motor x 1</p> <p>10K Potentiometer x 3</p>	1	Bundle	59,433.00	59,433.00

	Micro Servo x 1 Mini control x1 6 AA Battery Holder x 1 400 tie point interlocking solderless breadboard x 1 Training Content: Blinking LED SOS beacon Traffic light Fading light RGB LED Alarm Temperature alarm Detecting vibration Auto Light Moving servo Interact with servo RGB Light dimmer Motor fan Infrared controlled light Infrared controlled LED matrix With manufacturer's warranty With ISO 17025 Certification				
8.	LABORATORY EQUIPMENT, Multiple PLC Systems Trainer (3 different PLC) - General Specs: Compact type PLC training system Eight digital inputs Six digital outputs Six analog inputs Two analog outputs Can be connect and control SCADA Can be connect and control HMI Ladder simulation Analog and Digital sensor compatibility Technical Specifications: Eight digital inputs Six digital outputs Six Analog input Two analog outputs RS232 compatible RS485 compatible	1	Set	358,900.00	358,900.00

	24 Volts DC input Seven push button switches Two relays One DC motor Three pilot lights One photoelectric sensor 12V DC, NPN, 5mm, 1 KHz One photoelectric Sensor with Mirror feedback, 24 VDC, NC, NO Power: 220 Volts input/ 24V DC output/ 5 Amp Training Content: Emergency stop training Push On and Off Training Traffic light Control Training Relay Control Training Motor Control Training Sensor Control Training Analog input and output Control Training Counter Control Training Timer Control Training SCADA Interface Training PLC Programming Training Accessories included: Communication Cable 30 pcs connecting cables Power Cables PLC programming Software With manufacturer's warranty With ISO 17025 Certification				
9.	LABORATORY EQUIPMENT, Vision System Kit for	1	Set	160,000.00	160,000.00

	<p>Intelligent Robotic Arm - General Specs:</p> <p>Focus: 60mm</p> <p>Lens Diameter: Focal Length: 1:14</p> <p>Maximal Length size: 8.8mm x 6.6mm</p> <p>Aperture: F1.4-F16C</p> <p>Aperture and Focus Point Control: Manual</p> <p>With HD Color Industrial Camera</p> <p>Sensor Size: ½ CMOS</p> <p>Effective Pixel: at least 3Million Shutter</p> <p>Type: Curtain Exposure Exposure</p> <p>Control: Manual & Auto With USB data interface</p> <p>With White Auxiliary Light Source</p> <p>Luminous Color:</p> <p>White Illumination: 40000 lux</p> <p>Output Voltage 12V DC Output Power: 5-35W</p> <p>Operating Distance: 35-110mm</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>				
10.	<p>MACHINERY AND EQUIPMENT,</p> <p>Automatic Bomb Calorimeter</p> <p>Calorific Value Test Meter Machine Instrument</p> <p>Heat capacity: About 10500 J / K</p> <p>Oxygen bomb capacity: 300ml</p> <p>Oxygen charging pressure: 2.8 ~ 3.2 MPa</p> <p>Pressure resistance: water pressure 20MPa</p> <p>Weight: 2.5 kg</p> <p>Overall dimension: 650 * 450 * 500 mm</p> <p>Temperature range: 0 ~ 40 °C</p> <p>Response time: < 4 S</p> <p>Resolution: 0.0001</p> <p>Linearity: < 0.08% per 5 oC</p> <p>temperature rise range</p> <p>Temperature measurement error: ± 0.003</p> <p>Power supply voltage: AC220V ± 10%</p> <p>Humidity: up to 80%</p> <p>Power: 30W</p> <p>Ignition voltage: AC24 V</p> <p>Ignition time: 5S</p> <p>With manufacturer's warranty</p> <p>With ISO 17025 Certification</p>	1	Unit	230,000.00	230,000.00

11.	MACHINERY AND EQUIPMENT, Brake dynamometer Power range: 10-20 hp Max RPM: 2000 rpm Max Torque: 400 Nm With manufacturer's warranty With ISO 17025 Certification	1	Unit	250,000.00	250,000.00
12.	MACHINERY AND EQUIPMENT, Diesel engine with common rail intercooler Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air-air intercooler Alternator-oil filter-oil pump	1	Unit	96,000.00	96,000.00
13.	MACHINERY AND EQUIPMENT, Gasoline engine with common rail Educational Trainer 4 stroke engine; 4 in-line cylinders; 4 valves per cylinder Displacement: 2500/2800 cu. Cm Power: 150-170 hp At 4000 RPM Twin overhead camshaft (DOHC) with timing belt Vibration-damping balancing shafts Common rail-type direct injection with electro-injectors Turbo-supercharger with air to air intercooler Alternator-oil filter-oil pump With manufacturer's warranty With ISO 17025 Certification	1	Unit	96,000.00	96,000.00
14.	MACHINERY AND EQUIPMENT, Lab Mill/Husker Capacity: 250 grams paddy sample Capacity/hr: 50 kg/hr Power: 400 W (0.5 hp) single phase Head Power: 1,900 RPM Follow power: 1,000 RPM Size: 720x 480 x 1400 mm Weight: 49kg Power source: 220 V, 60 hz With manufacturer's warranty With ISO 17025 Certification	1	Unit	118,000.00	118,000.00

15.	<p>MACHINERY AND EQUIPMENT, Laboratory Oven (Forced Air-Drying Oven) Capacity: 54L Temp. Range: RT+10°C~300°C Temp. Precision: 0.1°C Temp. Uniformity: ≤Max Temp.±2.5 % Circulation Mode: Back heating, forced convection Timing Range: 0-9999min/h Shelves NO. (pc): 2 Display: LCD Power Supply: 220V±10% 50/60Hz or 110V±10% Gross Weight(kg): 40-45, with instructional/laboratory manual</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	Unit	84,000.00	84,000.00
16.	<p>MACHINERY AND EQUIPMENT, Moisture Analyzer (multi-crop): Input voltage: 230 V AC 50 Hz Weighing capacity (Max): Maximum humidity: 80% Maximum operating temperature: 400C Maximum ambient temperature: 5 °C Minimum humidity: 5% Readability (moisture): 0.050% Tare range: 200g</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	Unit	118,000.00	118,000.00
17.	<p>MACHINERY AND EQUIPMENT, Multiparameter Water Quality Meter, Portable Type, pH Range -2.000-20.000pH Resolution 0.001,0.01,0.1pH, selectable Accuracy 0.002pH Calibration Points 1 to 5 points pHBuffer Options USA, NIST, DIN, 2 custom buffers ORP Range ±1999.9mV Resolution 0.1, 1mV, selectable Accuracy ±0.2mV Calibration Points 1 point Ion Range 0.001~19999 (depending on the range of ISE) Resolution 0.001, 0.01, 0.1, 1 Accuracy ±0.5% F.S. (monovalent), ±1% F.S. (divalent) Measurement Units ppm, mg/L, mol/L, mmol/L Calibration Points 2 to 5 points (0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000) Conductivity Range 0.01~20.00, 200.0,</p>	2	Unit	65,000.00	130,000.00

	<p>2000µS/cm, 20.00, 200.0mS/cm Resolution 0001,0.01,0.1,1 Accuracy ±0.5% F.S. Calibration Points 1 to 5 points Calibration Solutions 10µS/cm, 84µS/cm, 1413µS/cm, 12.88mS/cm, 111.8mS/cm Temperature Coefficient Linear(0.0- 10.0%/°C). pure water Reference Temperature 20/25°C Cell Constant K=0.1, 1, 10 or custom TDS Range 0~10.00, 100.0, 1000ppm, 10.00, 200.0ppt Resolution 001,0.1,1 Accuracy ±1% F.S. TDS Factor 0.1~1.0 (default 0.5) Salinity Range 0.00~42.00psu, 0.00~80.00ppt Resolution 0.01 Accuracy ±1% F.S. Resistivity Range 0.00~20.00M? Resolution 0.01 Accuracy ±1% F.S. DO Range 0.00~20.00mg/L, 0.0~200.0% saturation Resolution 001mg/L,0.1% Accuracy ±0.2mg/L, ±2.0% Calibration Points 1 or 2 points</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>				
18.	<p>MACHINERY AND EQUIPMENT, NIR Spectrometer price analyzer (portable spectrometer) " Wavelength Range: 350-950 Stray light: 0.3% Spectral bandwidth (FWHM): 2nm CCT range: 1,000K~ 100,000K Frequency range: 25-1KHz Chromaticity coordinate accuracy: ±0.0025 Application: Agricultural Light source Frequency sampling rate: 1-10KHz</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>	1	Unit	230,000.00	230,000.00
19.	<p>MACHINERY AND EQUIPMENT, One Set Tersus Oscar Basic (One Base and One Rover) Multi-Frequency GNSS Receiver for Static, RTK AND PPK Application GNSS BOARD: GNSS BOARD ORIGINALLY DESIGNED AND MANUFACTURED BY THE SAME BRAND. APPLICATION: With static, post Processed and real time kinematic. Display : NO DIGITAL DISPLAY</p>	2	Unit	650,000.00	1,300,000.00

	<p>Satellite Tracking: GPS, GLONASS, BEIDOU AND GALILEO, QZSS, SBAS ACCURACY: MINIMUM High-Precision Static (RMS) Horizontal 2.5mm+0.1ppm Vertical 3.5mm+0.4ppm Static & Fast Static (RMS) Horizontal 2.5 mm + 0.5 ppm Vertical 5 mm + 0.5 ppm Real Time Kinematic (RMS) Horizontal 8 mm + 1 ppm Vertical 15 mm + 1 ppm Post Processed Kinematic (RMS)</p> <p>Special feature: REALLY FIX UNDER CANOPIES (must be tested in actual) FREE INTERNET RTK SUBSCRIPTION (NTRIP) Battery operation must be 16hours with two batteries with led light indicator in battery for charge status</p> <p>MUST BE NTC TYPE APPROVED MUST BE A DIRECT DISTRIBUTOR (EXCLUSIVE) SOFTWARE</p> <p>1. CAN BE INSTALLED IN ANDROID PHONES, TABLET OR ANY ANDROID GADGETS 2. FREE AND DOWNLOADABLE AT ANYTIME 3. CONTROLLER SOFTWARE MUST HAVE DATAQUALITY CONTROL LIKE CONFIGURING ONLY THE ALLOWABLE TOLERABLE ERROR. 4. tripod included</p> <p>With manufacturer's warranty With ISO 17025 Certification</p>				
20.	<p>MACHINERY AND EQUIPMENT, Portable Biogas Analyzer "Gases detected CH4, CO2, H2S, O2 Measuring range CH4: (0-100)%vol CO2: (0-100)%vol H2S: (0~1000) ppm O2: (0~30.0)%vol Resolution ratio CH4: 1%vol, CO2: 1%vol, H2S: 1ppm, O2: 0.1%vol Sensor Infrared sensor and electrochemical sensor Sensor lifetime: 5years(CH4, CO2) 2years(H2S, O2) Response time CH4: 45S (T90) CO2: 45s (T90) H2S: 45s (T90) O2: 45s (T90) Alarms Audible-- buzzer with 80dB audible Visible--</p>	1	Unit	118,000.00	118,000.00

	flashing red LED, 20m visible Alarm point Fully adjustable Data logging Continuous Data logging (1900 events at configurable 0.1-10 minutes intervals) Continuous working time is 13hours Display Liquid Crystal Display (LCD) Battery model PL123450, 3.7V/1500mA Charging time 4-5 hours Dust and water resistance IP65 With manufacturer's warranty With ISO 17025 Certification				
21.	MACHINERY AND EQUIPMENT, Water Activity Meter " Measurement range: 0.1 to: 0.98 Aw (5°C - 45°C) Measuring principle: Electrolytic (surface IR and NTC) Measurement accuracy: AW ± 0.01 (± 15) precision: ± 0.003 aw within the adjustment range ($\pm 0.1^\circ\text{C}$) Resolution: 0.001aw (0.1°C) Accuracy: ± 0.010 aw within calibration range ($\pm 0.15^\circ\text{C}$) With manufacturer's warranty With ISO 17025 Certification	1	Unit	230,000.00	230,000.00

Name of Supplier : _____

Address : _____

Contact Number : _____

[Use this form for Framework Agreement:]

Technical Specifications

TECHNICAL SPECIFICATIONS			
Item / Service	Maximum Quantity	Technical Specifications / Scope of Work	Statement of Compliance
			<p>[Bidders must state here either “Comply” or “Not Comply” against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of “Comply” or “Not Comply” must be supported by evidence in a Bidders Bid and crossreferenced to that evidence. Evidence shall be in the form of manufacturer’s un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution.]</p>

Section VIII. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

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

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

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

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

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

Technical Documents

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

Financial Documents

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

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

Class "B" Documents

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

II. FINANCIAL COMPONENT ENVELOPE

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

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

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

ANNEX I – BIDDING FORMS

Bid Form for the Procurement of Goods

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. _____:

To: [name and address of Procuring Entity]

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

If our Bid is accepted, we undertake:

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

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

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

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

(if none, state “None”) /

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

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

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

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

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

Name: _____

Legal capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Date: _____

Bid Securing Declaration Form

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

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

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

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

I/We, the undersigned, declare that:

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

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

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

[Insert signatory's legal capacity]
Affiant

[Jurat]

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

Omnibus Sworn Statement (Revised)

[shall be submitted with the Bid]

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

AFFIDAVIT

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

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

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

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

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

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

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

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

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. *[Select one, delete the rest:]*
[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

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

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. [Name of Bidder] complies with existing labor laws and standards; and
8. [Name of Bidder] is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
 - a. Carefully examining all of the Bidding Documents;
 - b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
 - c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the [Name of the Project].
9. [Name of Bidder] did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

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

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

[Insert signatory's legal capacity]

Affiant

[Jurat]

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

Price Schedule for Goods Offered from Within the Philippines

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

For Goods Offered from Within the Philippines

Name of Bidder _____ Project ID No. _____ Page ____ of ____

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

Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

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

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

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

Name and Signature of

Date

Authorized Representative

*Instructions:

a) Cut-off date as of:

(i) **Up to the day before the deadline of** submission of bids.

b) **In the column under “Dates”, indicate the dates of Delivery/ End-user’s Acceptance and Official Receipt.**

c) **“Name of Contract”. Indicate here the Nature/ Scope of the Contract for the Procuring Entity to determine the relevance of the entry with the procurement at hand. Example: “Supply and Delivery of Generator Set”**

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

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

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

Name and Signature of _____

Date _____

Authorized Representative

***Instructions:**

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

Contract Agreement Form for the Procurement of Goods (Revised)

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

CONTRACT AGREEMENT

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as integral part of this Agreement, viz.:

- i. Philippine Bidding Documents (PBDs);
 - i. Schedule of Requirements;
 - ii. Technical Specifications;
 - iii. General and Special Conditions of Contract; and
 - iv. Supplemental or Bid Bulletins, if any

- ii. Winning bidder’s bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;

- iii. Performance Security;
- iv. Notice of Award of Contract; and the Bidder’s conforme thereto; and
- v. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

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

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

[Insert Name and Signature]

[Insert Name and Signature]

[Insert Signatory's Legal Capacity]

[Insert Signatory's Legal Capacity]

for:

for:

[Insert Procuring Entity]

[Insert Name of Supplier]

Acknowledgment

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

