



Republic of the Philippines

DEPARTMENT OF SCIENCE AND TECHNOLOGY

PHILIPPINE SCIENCE HIGH SCHOOL - CALABARZON REGION CAMPUS



Certificate No.: SCP000240Q

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

I. Background

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

II. Rationale

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

III. Scope of Work and Job Specifications

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

IV. Approved Budget for the Contract

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

V. Evaluation and Selection Criteria

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

Page 1 of 35



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VI. Payment Scheme

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

VII. Delivery Term

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



Enclosure No. 1

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

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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



Sample Pictures



Item No 1: Ultrapure water purification system



Item No 2: Emergency eyewash and shower



Item No 3: Muffle furnace



Item No 4: Biosafety cabinet



Item No 5: Laminar Flow Clean Bench



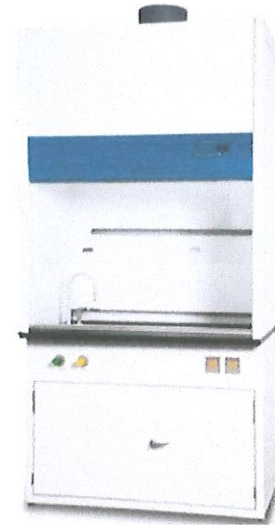
Item No 6: Autoclave



Item No 7: Laboratory incubator



Item No 8: Refrigerator



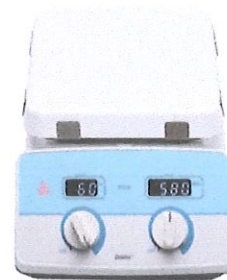
Item No 9: Fume Hood



Item No 10: Toploading/Precision balance



Item No 11: Analytical balance



Item No 12: Hotplate magnetic stirrer



Item No 13: Centrifuge



Item No 14: Micropipette



Item No 15: Drying oven



Item No 16: Moisture analyzer



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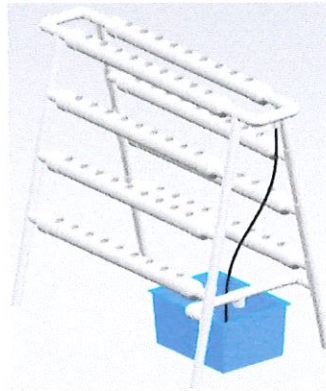
PHILIPPINE SCIENCE HIGH SCHOOL - CALABARZON REGION CAMPUS



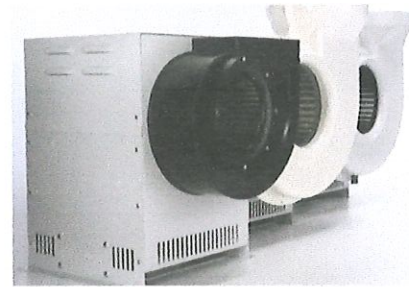
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Item No 17: Vacuum sealer



Item No 18: Hydroponic growing pipe system



Item No 19: Chemical Laboratory blower fan



Item No 20: Sky Quality Meter



Item No 21: Viscometer



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Certificate No.: SCP000240Q



Item No 22: Heavy-duty Grinder



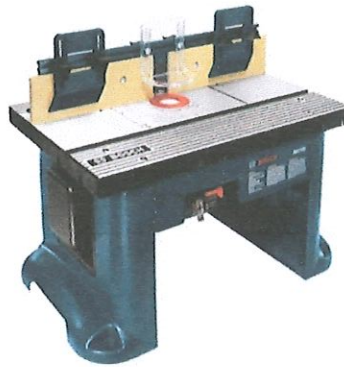
Item No 23: Radial Arm Saw



Item No 24: Belt disc sander



Item No 25: Table saw



Item No 26: Router Table



Item No 27: Benchtop Drill Press



Item No 28: Circular saw



Item No 29:
Band saw



Item No 30: Flux cord welding
machine



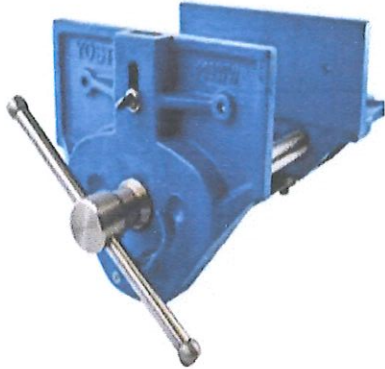
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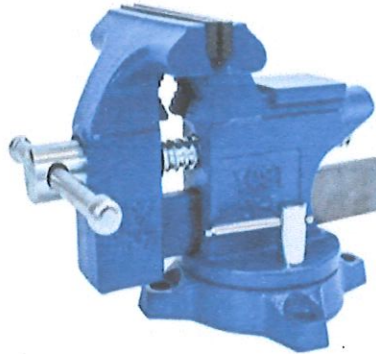
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Certificate No.: SCP000240Q



Item No 31: Rapid Acting Vise



Item No 32: Table Vise



Item No 33: Cutter Plotter



Item No 34: Desktop 3D Printer



Item No 35: Vacuum Forming Machine



Item No 36: High Speed Lockstitch Industrial Sewing Machine



Item No 37: High Speed Overlock Safety Switch Machine



Item No 38: Benchtop Wood Lathe



Item No 39: Digital Oscilloscope



Item No 40: Waveform Function Generator



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Certificate No.: SCP000240Q



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



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



Item No 43: 2HP Dust Collector



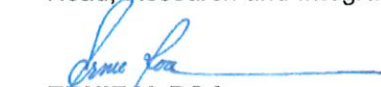
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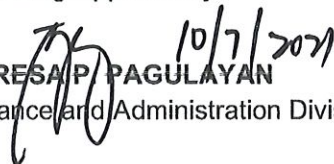

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