

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
RTC-Cebu – TESDA 7 Compound Archbishop Reyes Avenue, Cebu City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 7. CNC Lathe and Milling Machine Operation NC III				
1	CNC Milling Machine	<p>General Specifications: CNC Vertical Milling Machine Table Size: Length 750 mm - 1000 mm; Width 350 - 550 mm, Table Load Capacity: 500-1400 kg, Travel X-axis: mm - 850 mm, Y - axis: 400 mm - 600 mm, Z - axis: 500 mm - 600 mm, Maximum Spindle speed: 8,000 - 12,000 rpm; Direct Drive, Spindle Taper: BT 40, Tool Storage Capacity: 20 tools - 30 tools only, Electricals: 220 volts / 3 phase / 60 Hz, Spindle Motor Power: 20 hp - 30 hp, Max Rapids on (x, y, z): 25.4 m/ min - 42 m/ min; Servomotors on all axes, 4th Axes Drive and wiring, Coolant system, Max tool diameter: 80 -95 mm, bearing lubrication: air / oil/ grease injection</p> <p>Important features Included: • 3 Units External CNC CONTROLLER SIMULATOR (Stand-alone exact replica (duplicate) of the CNC Controller of the machine for off-machine training on CNC programming, operation and simulation) • 4th Axis Rotary Table (Can be mounted horizontal / vertical, Worktable diameter: 160mm -350mm diameter, Accuracy: ±15sec, Servo Motor, complete with accessories)</p> <p>Machine Accuracy & Control Specifications • Control type - Dialog, Conversational/ Intuitive Programming Sys. /EIA/ ISO PROGRAMMING • Working Memory - 2 mb up to 1 gb</p> <p>Minimum features and accessories included: • Fully enclosed machining center • USB port • ethernet interface • Automatic tool length measuring device/ Touch probe • Automatic voltage regulator 30KVA, 3 Phase, 220V • Air Compressor • Specified machining tool list: • 1 pc Drill Chuck • 1 pc Drill Chuck arbor BT 40 • 5 pcs Quick Change Milling (Collet) Chuck • 10 pc pull studs • 15 pc Collets (3-25 mm) • 1 pc Face mill arbor • 20 pcs Carbide Inserts • 1 set HSS End mills • 1 set HSS Drill Bits • 1 pc BT 40 Spindle taper cleaner • 1 pc mill vise • Coolant (pail) - 1 pc. • With operations/ maintenance manual in English Language</p>	1	unit

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		<ul style="list-style-type: none"> • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 		
2	Lathe Machine (Conventional)	<p>General Specifications: Horizontal Lathe Capacity</p> <ul style="list-style-type: none"> • Max swing over bed: 380 mm - 560 mm • Max swing over gap: 600 mm - 780 mm • Max swing over cross-slide: 200 mm - 380 mm • Distance between centers: 1000 mm • Bed width: 220 mm - 350 mm • Cross slide travel: 230 mm - 300 mm <p>Main Spindle</p> <ul style="list-style-type: none"> • Spindle bore: $\Phi 50$ mm - $\Phi 80$ mm • Max Spindle speed: more than 1600 rpm <p>Tailstock</p> <ul style="list-style-type: none"> • Tailstock spindle taper: MT 3, 4 or 5 <p>Threading</p> <ul style="list-style-type: none"> • Metric pitch threads: 0.2-14 mm/ pitch • Inch pitch threads: 2-75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds: 0.04-1 mm/rev • Range of cross feeds: 0.02-1.25 mm /rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply: 220 volts 60hz • Phase: 3 phase • Main spindle motor: 5 - 10 hp • Coolant pump motor: 1/8 hp <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck, 4 Jaw chuck , Face plate • 1 pc - live center , dead center • 1 pc - Steady rest, follower rest • 1 set - lathe dog (straight and bend tail) • 1 set tool holder (left hand, right hand, neutral & threading tool) • 1 pc - drill chuck with arbor • quick change tool post • with Operations/ maintenance manual in English • With Digital Read Out • with sleeve for MT 4 and MT 5 Machines • 1 year warranty for spare parts and 2 years in support service <ul style="list-style-type: none"> • Includes Machine Commissioning and Training 	1	unit
3	Milling Machine (Conventional)	<p>General Specifications: Vertical Turret Type Milling Machine</p> <ul style="list-style-type: none"> • Table Size: Length 1270 mm x Width 254 mm • Longitudinal Travel (x): 800 mm - 950 mm • Cross Travel (y): 305 mm - 410 mm 	1	unit

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		<ul style="list-style-type: none"> • Vertical Travel (Knee) (z): 305 mm - 410 mm • Max work piece weight: 300 - 400 kg • Spindle Motor: 2 hp to 3 hp • Maximum Spindle Speed: 2500 rpm-5500 rpm • Electricals: 220 V/ 3 phase/ 60 Hz Accessories included: <ul style="list-style-type: none"> • 1 set - Dividing Head gear ratio 40:1 w/ sets of gear, footstock, 3 indexing plates, sector arm • 2 sets of module cutter (mod 1.5, 2.0, 2.5) • Spindle Arbor/ Milling Arbor • with operations/ maintenance manual in English Language • 1 year warranty for spare parts and 2 years in support service <ul style="list-style-type: none"> • Includes Machine Commissioning and Training 		
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached	8 TB	1	unit

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
	Storage	At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible		
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless	1	unit
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style	1	unit
9	Drone	Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller *Max Transmission Distance: 2.400 - 2.483 Ghz	1	unit

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>(Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh LiPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: LiPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video</p>	1	unit

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC		
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment.	10	set

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Calibrated in newtons		
15	Vernier Caliper	Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight	10	set
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C With permanently fused markings, packed in protective sleeving	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc

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22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Handwritten signatures and initials, including a large 'p' and 'ek' followed by a signature, and another signature to the right.

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Balicuatro College of Arts and Trades – Allen, Northern Samar				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
Lot 9. Refrigeration and Air-Conditioning Servicing NC III				
1	Variable Refrigerant Frequency Air Conditioning Unit with Central Controller	8 HP capacity outdoor unit with 4 fan coil unit (FCU) 1 HP wall mounted 2 HP ceiling suspended cassette type (FCU) 220 volts 1 phase 60 hz	2	unit
2	Inverter Type Air Conditioning Unit (Cassette)	PACU cassette type A/C unit; 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3.0 tons	4	unit
3	Inverter Type Air Conditioning Unit (Ceiling Concealed)	Package type A/C unit, ceiling concealed ducted inverter split type, 5.0 kw, 220 volts, 60 hz, 2 hp capacity	4	unit
4	Inverter Type Air Conditioning Unit (Floor Mounted)	Split type A/C unit, floor mounted, 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3 TR	4	unit
5	Inverter Type Air Conditioning Unit (Wall Mounted)	Split type A/C unit, wall mounted, 220 volts, 60 hz, 1 phase, cooling capacity, 10 kw, 3 hp capacity	4	unit
6	Oxy-acetylene with Complete Accessories	With complete accessories, cuts up to 15 mm, welds up to 5 mm with torch handle, equal pressure cutting attachment for acetylene and alternative fuels, mixer, 3 welding tips, cutting tips, single stage cylinder regulator for oxygen, safety goggle, igniter and flints, 10 way tank wrench, 6 m twin hose, brass handle with large flow capacity for heavy duty applications	4	unit
7	Welding Helmet (Auto-Darkening)	Auto darkening lense, wide vision, variable shade from DIN 9-13	5	pc
8	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power 220 V, output current: 200 Ampere	4	unit
9	Leak Detector	Intended for 404A, 410A, digital type heated diode sensor with mechanical pump, sensitivity level 2, sensitivity per year 0.25 ounce/ year, CFC's, HCFC and HFC, sensor 2D alkaline batteries spare, filter and hard plastic carrying case, unit cases heated diode sensor technology automatically compensate for changing background, contamination	4	unit
10	Anemometer SE	Digital type, measuring the current wind speed with minimum and average values, temperature display and perceive temperature (wind chill), wind strength can be set as meter, m/s, km/h, mph, knots	5	unit
11	Refrigerant Recovery Machine (Hydrocarbons)	220-240 VAC, 60hz, with recovery tank of 50 lbs capacity, direct liquid of 3.03 lbs per minute, direct vapor of 0.03 lb per minute, push/pull of 12.22 lbs per minute	4	unit
12	Vacuum Pump	Two-stage, 220 VAC, 60 hz, single phase, 5.0 CFM capacity	4	unit
13	Portable High Pressure Washer	220 volts, 60 hz, 1 hp capacity, single phase	5	unit
14	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	4	unit
15	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single	4	unit

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		phase		
Lot 14. Information and Communication Technology				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours	1	unit

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	<p>8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio;</p> <p>Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style</p>	1	unit
9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal</p> <p>Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p> <p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh liPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: liPo 4S</p>	1	unit

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		<p>Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m)</p> <p>Operating Range: 0 - 33 ft (0 - 10 m)</p> <p>Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m)</p> <p>Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s</p> <p>Electronic Shutter Speed: 8 - 1/ 8000 s</p> <p>PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG)</p> <p>Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger</p> <p>Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC</p>	1	unit

Lot 15. Science Lab (Chemistry and Physics)

NO.	ITEM	AGENCY SPECS	QTY	UNIT
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total	7	pc

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving		
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value	10	set

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NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight		
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C With permanently fused markings, packed in protective sleeving	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

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Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
Lot 7. CNC Lathe and Milling Machine Operation NC III				
1	CNC Milling Machine	<p>General Specifications: CNC Vertical Milling Machine Table Size: Length 750 mm - 1000 mm; Width 350 - 550 mm, Table Load Capacity: 500-1400 kg, Travel X-axis: mm - 850 mm, Y - axis: 400 mm - 600 mm, Z - axis: 500 mm - 600 mm, Maximum Spindle speed: 8,000 - 12,000 rpm; Direct Drive, Spindle Taper: BT 40, Tool Storage Capacity: 20 tools - 30 tools only, Electricals: 220 volts / 3 phase / 60 Hz, Spindle Motor Power: 20 hp - 30 hp, Max Rapids on (x, y, z): 25.4 m/ min - 42 m/ min; Servomotors on all axes, 4th Axes Drive and wiring, Coolant system, Max tool diameter: 80 -95 mm, bearing lubrication: air / oil/ grease injection</p> <p>Important features Included: • 3 Units External CNC CONTROLLER SIMULATOR (Stand-alone exact replica (duplicate) of the CNC Controller of the machine for off-machine training on CNC programming, operation and simulation) • 4th Axis Rotary Table (Can be mounted horizontal / vertical, Worktable diameter: 160mm -350mm diameter, Accuracy: ±15sec, Servo Motor, complete with accessories)</p> <p>Machine Accuracy & Control Specifications • Control type - Dialog, Conversational/ Intuitive Programming Sys. /EIA/ ISO PROGRAMMING • Working Memory - 2 mb up to 1 gb</p> <p>Minimum features and accessories included: • Fully enclosed machining center • USB port • ethernet interface • Automatic tool length measuring device/ Touch probe • Automatic voltage regulator 30KVA, 3 Phase, 220V • Air Compressor • Specified machining tool list: • 1 pc Drill Chuck • 1 pc Drill Chuck arbor BT 40 • 5 pcs Quick Change Milling (Collet) Chuck • 10 pc pull studs • 15 pc Collets (3-25 mm) • 1 pc Face mill arbor • 20 pcs Carbide Inserts • 1 set HSS End mills • 1 set HSS Drill Bits • 1 pc BT 40 Spindle taper cleaner • 1 pc mill vise • Coolant (pail) - 1 pc. • With operations/ maintenance manual in English Language</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<ul style="list-style-type: none"> • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 		
2	Lathe Machine (Conventional)	<p>General Specifications: Horizontal Lathe Capacity</p> <ul style="list-style-type: none"> • Max swing over bed: 380 mm - 560 mm • Max swing over gap: 600 mm - 780 mm • Max swing over cross-slide: 200 mm - 380 mm • Distance between centers: 1000 mm • Bed width: 220 mm - 350 mm • Cross slide travel: 230 mm - 300 mm <p>Main Spindle</p> <ul style="list-style-type: none"> • Spindle bore: $\Phi 50$ mm - $\Phi 80$ mm • Max Spindle speed: more than 1600 rpm <p>Tailstock</p> <ul style="list-style-type: none"> • Tailstock spindle taper: MT 3, 4 or 5 <p>Threading</p> <ul style="list-style-type: none"> • Metric pitch threads: 0.2-14 mm/ pitch • Inch pitch threads: 2-75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds: 0.04-1 mm/rev • Range of cross feeds: 0.02-1.25 mm /rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply: 220 volts 60hz • Phase: 3 phase • Main spindle motor: 5 - 10 hp • Coolant pump motor: 1/8 hp <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck, 4 Jaw chuck , Face plate • 1 pc - live center , dead center • 1 pc - Steady rest, follower rest • 1 set - lathe dog (straight and bend tail) • 1 set tool holder (left hand, right hand, neutral & threading tool) • 1 pc - drill chuck with arbor • quick change tool post • with Operations/ maintenance manual in English • With Digital Read Out • with sleeve for MT 4 and MT 5 Machines • 1 year warranty for spare parts and 2 years in support service <ul style="list-style-type: none"> • Includes Machine Commissioning and Training 	1	unit
3	Milling Machine (Conventional)	<p>General Specifications: Vertical Turret Type Milling Machine</p> <ul style="list-style-type: none"> • Table Size: Length 1270 mm x Width 254 mm • Longitudinal Travel (x): 800 mm - 950 mm • Cross Travel (y): 305 mm - 410 mm 	1	unit

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Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<ul style="list-style-type: none"> • Vertical Travel (Knee) (z): 305 mm - 410 mm • Max work piece weight: 300 - 400 kg • Spindle Motor: 2 hp to 3 hp • Maximum Spindle Speed: 2500 rpm-5500 rpm • Electricals: 220 V/ 3 phase/ 60 Hz Accessories included: <ul style="list-style-type: none"> • 1 set - Dividing Head gear ratio 40:1 w/ sets of gear, footstock, 3 indexing plates, sector arm • 2 sets of module cutter (mod 1.5, 2.0, 2.5) • Spindle Arbor/ Milling Arbor • with operations/ maintenance manual in English Language • 1 year warranty for spare parts and 2 years in support service <ul style="list-style-type: none"> • Includes Machine Commissioning and Training 		
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached	8 TB	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTexs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
	Storage	At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible		
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless	1	unit
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style	1	unit
9	Drone	Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller Max Transmission Distance: 2.400 - 2.483 Ghz	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>(Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh LiPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: LiPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC		
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment.	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Calibrated in newtons		
15	Vernier Caliper	<p>Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value</p> <p>Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight</p>	10	set
16	Ammeters	<p>Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories</p>	5	set
17	Biological Microscope	<p>Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x</p> <p>Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see</p> <p>Basic condenser concentrates light onto the specimen</p> <p>Adjustable arm (0° to 60°) for comfortable viewing</p>	1	unit
18	Thermometer	<p>Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion</p> <p>Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C</p> <p>With permanently fused markings, packed in protective sleeving</p>	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	<p>300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop</p> <p>Bristles approximately 25 mm (1 inch) diameter</p>	5	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Kabasalan Institute of Technology – F. L. Peña, Kabasalan, Zamboanga Sibugay				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
Lot 4. Automotive Servicing				
1	Parts Washer	Drum: Inside dimensions - 7" H X 28" W X 22" D Fluid Requirements: 10 gallons Input: 120 V/ 220VAC (60 Hz) Pump Volume: 210 GPH Output Pressure: 50 PSI Dimensions: 35" X 31" X 23" Open Height: 60"	2	unit
2	Tire Changer	Inside clamping: 13 - 26" Outside clamping: 11 - 24" Voltage: 220 V Motor Power: 0.75 kw/ 1.1 kw HP: 1 Operating Pressure: 90 psi	2	unit
3	Roller Cab/ Trolley Tool Set	5 Drawers Roller Cab with the following tool set: 1 set Screwdriver L-shape Wrench 1 set Double-open-end wrench 1 set 45 deg. Double wrench set 1 set Ratcheting combination wrench set 1 set Adjustable wrench set 1 set Standard pliers set 1 set Circlip plier set 1 set Impact socket set 1 set 3/8" Square drive socket set 1 set 1/4" Square drive socket set 1 set 1/2" Square drive socket set	2	unit
4	Lifter Wheel Aligner	Design: Scissor Lifting Capacity: 3500 - 5000 kg Lifting Height: 1700mm Motor: 220V/ 50 Hz	1	unit
5	Electronic Battery Tester	Battery Nominal Voltage: 12 V CCA : 125 A to 1400 A SAE/EN: 200 A to 900 A DIN/ IEC: 120 to 550 3-4 digit LED display	2	unit
6	Car Wheel Balancer	Power supply: 220 V/ 380 V Measuring time: 8-20 sec. Max. rim diameter: 10" - 24" Balancing speed: 42 - 220 rpm Max. rim width: 1.5" - 20" Max. wheel weight: 65 kg Balancing accuracy: \pm 5g	1	unit
7	Global Diagnostic System (GDS) Professional Scanner	CPU: Dual Core 1 GHz Battery: 3000mh, rechargeable Extension Memory Card: 32 G Memory: 512 MB LCD: 7.0 inch LCD Resolution: 1024 x 600 Screen: capacitive touch screen Cameras: 2 mega rear and 0.3 mega front	2	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
8	Front Wheel Alignment Trainer	<p>Included item:</p> <p>Original vehicle steering wheel Camber caster steering axis inclination</p> <p>A set of two wheels- turntable with gauges allows for measurement of the degree of turn on both sides of zero (for calculation of toe-in & toe-out)</p> <p>Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out.</p> <p>Technical Description:</p> <ol style="list-style-type: none"> 1. The trainer consists of an original front end unit from a typical passenger vehicle. 2. It has been modified for quick adjustment of all alignment and steering geometry points. 3. The unit is mounted on a special stand which facilitates alignment procedures and utilization of test equipment and accessories. The trainer comes with two wheel rims with tires. <p>Additional recommended accessories or options:</p> <p>Original vehicle steering wheel Camber/ caster steering axis inclination gauge A set of two wheel turntables with gauges allows for measuring of the degree of turn on both sides of zero for calculation of toe-in and toe-out Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out</p> <p>The following topics are covered in the instruction program:</p> <p>General theory on suspension and steering system including different types and geometry principles.</p> <p>Pre-alignment check procedures: tire pressure and wear, front wheel bearing play and adjustment, ball joint play inspection, shock absorber wear, steering gear looseness</p> <p>Caster: determination, adjustment and correction Camber: determination, adjustment and correction (positive and negative)</p>	1	unit
9	Anti-Lock Braking System with Traction Control System (TCS)	<p>The major components included are:</p> <p>Four rotating wheels with wheel sensors, with digital speed display for each wheel (4 digital displays);</p>	1	unit



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Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>4 variable speed electrical drive systems for each wheel to control the individual speed of each wheel, master brake cylinder with pedal handle;</p> <p>ABS hydraulic actuator (modulator) unit which is controlled by the on-board computer system (ECU);</p> <p>Five brake line pressure gauges to show the pressure differentials from the master brake cylinder to the individual wheels;</p> <p>Brake Master Cylinder with Vacuum assists boosts mechanism and brake pedal assembly;</p> <p>The front of the trainer features precise schematic color graphic illustrations that clearly explain the operation of the entire ABS and braking system;</p> <p>A control panel is provided with an on/ off power switch, power system light (POWER ON), ABS warning light (indicated problems) and an ABS operational light (ABS ON). Also has Volt and Ampere meters to measure the DC input power and a brake light to show the operation of the braking system just as on the vehicle;</p> <p>Special Road Conditions and Performance Display Panel;</p> <p>Optional Electronic Fault insertion panel and Electrical Test Point;</p> <p>The trainer comes complete with a training course on ABS operation and servicing including student job sheets and a technical manual on ABS systems;</p> <p>A series of options to enhance the trainer such as fault insertion systems, power supplies and additional instructional materials, vacuum pump for power brake boost;</p> <p>Power Source: Note that 30A, 12 Volt DC power source is required from the shop to operate the trainer. If none is available an optional 12 VDC power supply can be ordered to provide this correct power</p>		
10	Half-Cut AUV Engine Management System	<p>Electrical control gasoline engine assembly, auto fault</p> <p>Automatic transmission assembly</p> <p>Electrical and electronic devices such as: ECM, TCM, AFS, CKP, CMP, O2 sensor, WTS, control relay and etc.</p> <p>Injector, filter, fuel tank, fuel pump, fuel equipment, DC</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		12 V/ 60 A, battery 12 volts Ignition coil built -in, spark plug, high voltage resistant cables Cooling system: radiator, overflow tank Exhaust system: Catalytic converter, Emission, Silencer Ignition switch with key Anti-vibration dampers and a urethane wheels Control box, fuel tank, accelerator lever Automatic transmission oil pressure gauge for each singular (1.5MPA*83,2.5 MPA*4) Vacuum pressure gauge (1 MPA) Fuel pressure gauge Battery voltage gauge (30 V) Note Includes : training manual/ module		
11	Airbag System Trainer	The trainer consist of the following components: Sectioned steering wheel with deployable and reusable airbag Pressure regulator with air filter, solenoid valve and compressed air connection Airbag system circuit diagram with connection and test points Set of two mm test connection leads Inflator unit Rear cable unit SRS control unit Airbag simulator with graphic and LED display Crash switch simulation system Dash sensor unit Fuse Power indicator light Ignition switch Technical Parameters: The steering unit with a typical restraint unit. Additional components and controls are mounted on the board to complete the system such as the impact crash sensor and controls. The airbag operation is demonstrated and realistic faults are also introduced to show typical problems in the units. A typical electronic circuit for the SRS system is incorporated into the trainer. This can be used also for	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		realistic fault simulation to show typical problem in the units. After the circuit is connected, the airbag operation is both simulated via LED graphic display that shows the detonation and deployment of the air bag system in a simulated crash situation. And also the airbag deploys, synchronized with the LED graphic display unit, through the use of compressed air and a pressure regulator. The trainer comes with a comprehensive manual covering the operation of the trainer.		
12	Gas Tester	<p>The pump consists of a diaphragm with one way valve and thus the pump will only be heard to click when connected to the exhaust</p> <p>CO Function Specification:</p> <ul style="list-style-type: none"> - Calibrated range: 0-10% CO - (indicates un-calibrated to 20% C) - Accuracy: +/-0.5% CO typical - (throughout the indicated range 0.5% CO to 6.5% CO) <p>Kit Contents:</p> <ul style="list-style-type: none"> - Gas tester instrument including collector box and pulse pump/ water trap assembly - Metal exhaust probe with retaining springs - Flexible plastic pipes (3 lengths) - Instruction handbooks 	2	unit
13	Recovery Machine	<p>Compact and Lightweight</p> <p>40% smaller footprint, easy to carry, weighing in at 18 lbs</p> <p>Oil-less compressor Capable of recovering both liquid and vapour</p> <p>Handles almost all refrigerants Works with all common CFC, HFC, HCFC Refrigerants including R-410A</p> <p>High efficiency cross flow design Lay-out of fan and condenser is maximized for shorter cycle times</p> <p>High pressure safety shut-off switch Automatically shuts off machine if pressure rises above PSI</p> <p>Easy to operate Rugged case</p> <p>Easy to read gauges, comfortable handle and simple 2 valve controls</p>	2	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		IEC connector and power cord		
14	Brake Fluid Exchanger	Remove and replace fluid from most types and models of vehicles' brake system. Also removes trapped air	2	unit
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	<p>8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio;</p> <p>Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style</p>	1	unit
9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal</p> <p>Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p> <p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh LiPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p>	1	unit

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Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual) Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720 Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265) Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required Charger Voltage: 17.4 V		
10	DSLR Camera	Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC	1	unit
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 mi Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Cagayan de Oro (Bugo) School of Arts and Trades – Bugo, Cagayan de Oro City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		added value Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight		
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C With permanently fused markings, packed in protective sleeving	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 12. Food and Beverages Services NC III

1	Espresso Machine	Dual- boiler technology and saturated brewing groups, Steam Boiler Capacity: 7 Liters, Coffee Boiler Capacity: 3.4 Liters, Semi-Automatic, Stainless steel boilers and brewing groups, Omni-directional stainless steel steam wands, Solid stainless steel housing and base, Sight glass for water level monitoring of steam boiler, 220 V, 60 Hz	2	unit
2	Coffee Grinder	Wide grinding range, from espresso fine to a coarse drip, Revolutionary pass- through grind mechanism with 28 - 270 grind settings: 25 - 30 stepped macro settings plus a step less micro adjustment range, Convertible grinding forks- grind hands- free directly into a porta filter, or convert to grind into the included bin or your favorite dripper, Time- based grinding with three customizable presets, Power: 220 V, 60 Hz, 290 watts	3	unit
3	Coffee Maker	Dimensions (W x D x H cm): 22 x 26 x 28 cm Removable water reservoir: 1.4 L Pump pressure: 20 Bar Filter holder for ground coffee, pods and capsule Rapid Espresso Cappuccino System: Cup warmer Removable drip tray, 220 V, 60 Hz	5	unit
4	Juicer	1500 watts locked power juicer, 5.34 kg, juice jug capacity: 1.5 liters, pulp collector capacity: 3 liters, 220 V, 60 Hz	4	unit
5	Dinner Plates	10 inches diameter plate, ceramic/ porcelain, white in color, and round in shape	50	pc
6	Appetizer Plate	6 inches diameter; ceramic/ porcelain, white in color and round in shape	50	pc
7	Show/ Service Plates	13 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc
8	Salad Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc
9	Fish Plates	9 inches diameter, ceramic/ porcelain type, white in color and round in shape	50	pc
10	Dessert Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc
11	Side Plates or Bread Plates	6 inches diameter, ceramic/ porcelain, white in color, and round in shape	50	pc
12	Soup Plate/ Bowl	3 inches deep, ceramic/ porcelain, white in color and round in shape	50	pc
13	Bouillon Cups & Saucers	Ceramic/ porcelain, Cup and Saucer - 5 inches diameter, white in color	50	set
14	Teacups and Saucers	Ceramic/ porcelain; Set of cup and saucer cup - 10 oz capacity; Saucer - 4 cm diameter; white in color	50	set
15	Tea Pots	Stainless steel micromesh filter; 42-ounce tea pot and infuser	10	pc
16	Demitasse Set	Set of cup and saucer with teaspoon; ceramic/ porcelain, 3-1/3 oz cup capacity, 4 inches long tsp, white in color	50	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
17	Dinner Spoon	Measures 8" L 18/8 stainless steel construction Dishwasher safe	50	pc
18	Dinner Forks	Measures 8" L 18/8 stainless steel construction Dishwasher safe	50	pc
19	Dinner Knives	Measures 9-1/2" L 18/8 stainless steel construction Dishwasher safe	50	pc
20	Salad Forks	Stainless steel Length: 22.5 cm Thickness: 8 mm	50	pc
21	Salad Spoon	Measures: 6-3/4" L 18/8 stainless steel construction Dishwasher safe	50	pc
22	Salad Knives	Stainless steel Stain resistant, dishwasher safe, 5 - 7" long	50	pc
23	Fish Knives	Stainless steel fish knives Length: 22.5 cm Thickness: 8 mm Weight: 86 g	50	pc
24	Fish Forks	Stainless steel fish fork Length: 21.5 cm Thickness: 8 mm Weight: 86 g	50	pc
25	Dessert Spoons	Stainless steel; stain resistant, durable, 4" long	50	pc
26	Dessert Forks	Stainless steel; stain resistant, durable, 6" long	50	pc
27	Cocktail Forks	Stainless steel, stain resistant, durable, 4" long	50	pc
28	Teaspoon	Measures: 6 - 3/4" L 18/8 stainless steel construction Dishwasher safe	50	pc
29	Steak Knives	Stainless steel, stain resistant, durable, 6" long	50	pc
30	Service Forks	Stainless steel, stain resistant, durable, 7" long	20	pc
31	Service Spoons	Stainless steel, stain resistant, durable, 7" long	20	pc
32	Steak Forks	Stainless steel, stain resistant, durable, 6" long	50	pc
33	Oyster Forks	Stainless steel, stain resistant, measure 5 3/8" long	50	pc
34	Butter Knives	Stainless steel, stain resistant, durable, 16 cm	50	pc
35	Red Wine Glasses	Stemmed glass; 12 3/8 oz. capacity, crystal glass	50	pc
36	White Wine Glasses	Stemmed glass, 9 7/8 oz capacity, crystal glass	50	pc
37	Water Goblets	Stemmed glass, 14 3/4 oz capacity, crystal glass	50	pc
38	Champagne Flute	Stemmed glass, 190 ml capacity, crystal glass	50	pc
39	Pilsner Glasses/ Ice Tea Glasses	Crystal glass; Dimension: 8" H x 3" W x 3" D; Capacity: 16 oz	50	pc
40	Wine Decanter	Capacity: 200 ml, Material: High quality Glass, Unique and elegant shape, easy to pour	10	pc
41	Waiter's Friend	Stainless steel, all-in-one corkscrew, bottle opener and foil cutter	5	pc
42	Salt and Pepper Shakers	Stainless Steel Salt and Pepper Grinder	10	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
43	Rectangular Trays	Non-slip plastic tray; heavy duty construction for commercial use; rubber liner prevents slipping; stain and odor resistant	10	pc
44	Round (Bar) Trays	Non-slip plastic tray; Heavy duty construction for commercial use; Rubber liner prevents slipping; stain and odor resistant	10	pc
45	Soup Tureen	Microwave and dishwasher safe; white porcelain; covered soup tureen with ladle	10	pc
46	Peppermill	Stainless steel/ wood; 5.5 inch long	10	pc
47	Sauce Ladles	Stainless steel with end hook for hanging; heavy duty; Size: 20 cm x 4 cm	10	pc
48	Cake Servers	Stainless steel; stain resistant, durable, 5 1/2" long	10	pc
49	Ice Buckets with Tongs	Stainless Steel, 3 liters/ 0.8 gallon	10	pc
50	Boning Knives	Stainless Steel; 5 inch long; with black handle	10	pc
51	All-Purpose Knives	Stainless Steel; 8 inch chef knife; thickness: 3.0 mm; knife length: 13.5 inch; blade length: 8 inch	10	pc
52	Chopping Boards	Rubberized/ polyethylene, medium size, white in color	10	pc
53	Non-Stick Round (Crepe) Pan	Aluminum fry pan; non-stick coating fry pan; diameter: 16*4.0 cm - 20*4.0 cm, 26*4.8 cm; shape: round	10	pc
54	Turners (For Non-Stick Pans)	Silicone slot turner of kitchen; size: 342*82*48 mm	10	pc
55	Reach-in Chiller	Heavy duty; two door reach-in, stainless steel body; 500 liters capacity; 220 V/ 60 Hz; single phase	2	unit
56	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit
57	Water Dispenser (Hot & Cold Dispenser)	Cooling Capacity: 2 L/h Heating Capacity: 5 L/h Cold Water Temperature: 5 - 10°C Hot Water Temperature: 85 - 95°C Cooling Power: 90 W Heating Power: 550 W Compressor brand: Asbeila S30G Water Faucet Connection: Fixed Tank Material: Hot & Cold Tank Material Hot & Cold Tank Structure: Welding or belt Left & Right Side Panel Thickness: 0.5 mm Inner Silicon tube Level: Food Grade 220 V 60 Hz	5	unit
58	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000	5	unit
59	Washing Machine	Top loaded, 10 kgs, 220 volts, 60 Hz, single phase, spin dry	3	unit
60	Mop Bucket with Wringer	Plastic, 32 liters capacity	5	unit
61	Ice Crusher	220 V/ 300 watts/ 60 Hz, scrapping block ice into flake ice, micro switch, container volume: 1000 ml, 304 stainless steel blade	4	unit
62	Stand Mixer	3.5 liter capacity mixer, 220 V/ 700 watts, 4 speed electronic pulse, stainless steel basket	4	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTExs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
63	Hand Mixer	140 watts mixer, 6 speed operation, free standing base, 220 V, 60 Hz	5	unit
64	Food Processor	Heavy duty, 5 liters, stainless steel bowl, 220 V/ 60 Hz, 1 hp	3	unit
65	Steam Iron	Ceramic sole plate, output: 35 g/min, steam boost: 100 g, 2100 watts, water tank capacity: 270 ml, 220 V, 60 Hz	5	unit
66	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase	2	unit
67	Dishwashing Machine	Hood type 220 VAC/ 1 phase 800 - 1600 plates capacity per hour includes tray/ racks	2	unit
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD ·4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		English firmware/ User interface With file and media server Windows and MAC Compatible		
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless	1	unit
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style	1	unit
9	Drone	Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTexs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh liPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight		
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C With permanently fused markings, packed in protective sleeving	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Camiguin School of Arts and Trades – Lumad Mambajao, Camiguin				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

		mirror fisica for Student's Optics Physics Experiment		
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Lot 17. Air Conditioning Unit

NO.	ITEM	AGENCY SPECS	QTY	UNIT
1	Air Conditioning Unit	Inverter type air conditioning unit Split type AC unit, floor mounted, 4 hp, 220 volts/ 60 Hz/ 3 phase, cooling capacity: 10 kw	1	unit

[Handwritten signatures]

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 2. Agricultural Mechanization

1	Mechanical Dryer Recirculating Type	Capacity (Kg): 6,000 to 10,000 Loading Rate: 25 - 75 min Unloading Rate: 15 - 75 min Drying Rate: At least 0.5% - 3% per hour	1	unit
2	Walker Behind Vibrator Roller Compactor	Double drum Operating Weight 550 - 800 kgs Engine: Diesel or Gasoline Engine at 6.0 to 18 hp Travel Speed: 2 km/hr - 7.5 km/hr. Centrifugal Force: 15 KN to 25 KN.	1	unit
3	Rice Combine Harvester	At least 70 Horse Power Diesel Engine; Speed harvesting at 1.85 meters/second 2.00 to 3.00 meters cutting width	1	unit
4	Agricultural/ Farm Tractor Four Wheel Drive (90 -120 Hp) with Three (3) Point Hitch Linkage	Engine Power: 90 -120 hp with Rated Engine Speed of at least 2100 Rev/Min Number of Engine Cylinder: 4 - 6	1	unit
5	Rotavator/ Rotary Tiller - Four (4) Wheel Tractor Mounted	Mounted within 50 - 100 hp Agricultural/ Farm Tractor Working Width of 2000 mm and at least 44 blades working at 2100 rpm engine speed	1	unit
6	Four Bottoms Disc Plough, Four (4) Wheel Drive Tractor Mounted	Mounted to the Agricultural Tractor Power with 60 to 120 hp Tractor Working Width 1000 - 1600 mm Number of Disk: 4 Disk Diameter: 500 - 700 mm	1	unit
7	Engine Operated Chainsaw	Engine: Gasoline type Power Output: at least 5 hp (3.7 kw/ 4.8 bhp) Bar Length at least 20 inches	1	unit

Lot 14. Information and Communication Technology

1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n	3	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		USB port for shared printing/storage English firmware/ User interface Supports home and cloud application		
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless	1	unit
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style		
9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal</p> <p>Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p> <p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh liPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265) Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required Charger Voltage: 17.4 V		
10	DSLR Camera	Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC	1	unit
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 mi Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim	3	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)		
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight	10	set
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C	7	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
RTC/KorPhil-Davao – Buhisan, Tibungco, Davao City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		With permanently fused markings, packed in protective sleeving		
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
Lot 3. Aquaculture				
1	Dissolve Oxygen Meter	Display Type: LCD DO Measurement: 0 - 45 mg/L Temperature Compensation: -5 to 50°C	4	unit
2	Salinity Refractometer	Type: Analog Specific Gravity (SG): 1.000 - 1.070 Measurement Range: 0 to 100 ‰	5	unit
3	Soil PH Meter	Meter Type: Portable pH Range: 0 - 14 pH pH Resolution - ± 0.2 pH Humidity Range: 0 to 8%	5	unit
4	Water Thermometer	Meter Type: Digital Display Type: LCD Measuring Range: -200 to 1,370°C Resolution: 0.1°C, 1°C	4	unit
5	Digital Water PH Meter	Meter Type: Digital Display Type: LCD Measurement Range: -2 to 16 pH Resolution: 0.01 Accuracy: ± 0.1 Temperature Compensation: -10 to 120°C	4	unit
6	Secchi Disk	Type: Portable Size: 20 cm diameter with black and white sections - with calibrated line marked every half meter up to 20 meters	5	unit
7	Water Quality Test Kit	Test Range Ammonia Nitrogen: 0 - 3 ppm (mg/L) Nitrite Nitrogen: 0 - 0.8 ppm (mg/L) pH: 4 - 10 Alkalinity: 0 - 4000 ppm (mg/L) Carbon Dioxide: 0 - 100 ppm (mg/L) Chloride: 0 - 400 ppm (mg/L) Dissolved Oxygen: 0 - 20 ppm (mg/L) Total Hardness: 0 - 4000 ppm (mg/L) Temperature: -5 - 50°C	4	unit
8	Multiparameter Meter System	Meter Type: Portable/ Electrode Display Type: LCD Water Proof USB Connectivity pH Range: 0 - 14 Salinity Range: 0 - 70 Dissolved Oxygen Range: 0 to 50 ppm Temperature Range: -5 to 105°C	2	unit
9	Eckman Dredge	Material: Stainless Steel Sampling Area: 6" x 6" Inclusive of the following accessories: Messenger Steel Aircraft Cable (100 meters)	4	unit
10	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power: 220 V, output current: 200 Ampere	4	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100	2	unit
12	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit
13	Grass Cutter	Engine Type: 4 Stroke Fuel: Gasoline Displacement: 35.8 cc Fuel Tank: 630 ml - 700 ml	4	unit
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD ·4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector		1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style	1	unit
9	Drone	Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km) Battery: 6000 mAh liPo 2S	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>Video Output Port: GL300E HDMI, GL300F USB</p> <p>Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V</p> <p>Battery Type: liPo 4S</p> <p>Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m)</p> <p>Operating Range: 0 - 33 ft (0 - 10 m)</p> <p>Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m)</p> <p>Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s</p> <p>Electronic Shutter Speed: 8 - 1/ 8000 s</p> <p>PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG</p> <p>Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger</p> <p>Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC</p>	1	unit
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material	10	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		10 ml capacity		
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value</p> <p>Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight</p>		
16	Ammeters	<p>Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories</p>	5	set
17	Biological Microscope	<p>Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x</p> <p>Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see</p> <p>Basic condenser concentrates light onto the specimen</p> <p>Adjustable arm (0° to 60°) for comfortable viewing</p>	1	unit
18	Thermometer	<p>Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion</p> <p>Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C</p> <p>With permanently fused markings, packed in protective sleeving</p>	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	<p>300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop</p> <p>Bristles approximately 25 mm (1 inch) diameter</p>	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

**Procurement of Training Tools and Equipment for the Higher Level
DAC Qualification of the 23 CentExs**

Lupon School of Fisheries – Barrio Sainz, Mati, Davao Oriental

NO.	ITEM	AGENCY SPECS	QTY	UNIT
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Lot 16. Surveying Equipment

1	Total Station Surveying Equipment	<p>3.5" Large Dual Touch-screen HD Display Android Smartphone as data collector EDM Trigger, automatically measurement key 500 Meters long range reflector less 200,000.00 points memory data upload/ download Complete surveying/ construction/ road programs on board</p> <p>Electronic Bubble; direct data plotting on main screen</p> <p>Alphanumeric Keys for easy and quick data input MS Windows Compatible; GPS data ready Data Text, DXF, CSV/ AutoCAD ready</p> <p>Telescope - Length: 125 - 152 mm - Magnification: 30x - Image: Erect - Field of View: 1°20' - 1°30' - Resolve Power: 3" - Min. Focus Distance: 1.3 - 1.7 m</p> <p>Measurement Range: 1.5 to 5,000 meters</p>	1	unit
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Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTexs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 9. Refrigeration and Air-Conditioning Servicing NC III				
1	Variable Refrigerant Frequency Air Conditioning Unit with Central Controller	8 HP capacity outdoor unit with 4 fan coil unit (FCU) 1 HP wall mounted 2 HP ceiling suspended cassette type (FCU) 220 volts 1 phase 60 hz	2	unit
2	Inverter Type Air Conditioning Unit (Cassette)	PACU cassette type A/C unit; 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3.0 tons	4	unit
3	Inverter Type Air Conditioning Unit (Ceiling Concealed)	Package type A/C unit, ceiling concealed ducted inverter split type, 5.0 kw, 220 volts, 60 hz, 2 hp capacity	4	unit
4	Inverter Type Air Conditioning Unit (Floor Mounted)	Split type A/C unit, floor mounted, 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3 TR	4	unit
5	Inverter Type Air Conditioning Unit (Wall Mounted)	Split type A/C unit, wall mounted, 220 volts, 60 hz, 1 phase, cooling capacity, 10 kw, 3 hp capacity	4	unit
6	Oxy-acetylene with Complete Accessories	With complete accessories, cuts up to 15 mm, welds up to 5 mm with torch handle, equal pressure cutting attachment for acetylene and alternative fuels, mixer, 3 welding tips, cutting tips, single stage cylinder regulator for oxygen, safety goggle, igniter and flints, 10 way tank wrench, 6 m twin hose, brass handle with large flow capacity for heavy duty applications	4	unit
7	Welding Helmet (Auto-Darkening)	Auto darkening lense, wide vision, variable shade from DIN 9-13	5	pc
8	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power 220 V, output current: 200 Ampere	4	unit
9	Leak Detector	Intended for 404A, 410A, digital type heated diode sensor with mechanical pump, sensitivity level 2, sensitivity per year 0.25 ounce/ year, CFC's, HCFC and HFC, sensor 2D alkaline batteries spare, filter and hard plastic carrying case, unit cases heated diode sensor technology automatically compensate for changing background, contamination	4	unit
10	Anemometer SE	Digital type, measuring the current wind speed with minimum and average values, temperature display and perceive temperature (wind chill), wind strength can be set as meter, m/s, km/h, mph, knots	5	unit
11	Refrigerant Recovery Machine (Hydrocarbons)	220-240 VAC, 60hz, with recovery tank of 50 lbs capacity, direct liquid of 3.03 lbs per minute, direct vapor of 0.03 lb per minute, push/pull of 12.22 lbs per minute	4	unit
12	Vacuum Pump	Two-stage, 220 VAC, 60 hz, single phase, 5.0 CFM capacity	4	unit
13	Portable High Pressure Washer	220 volts, 60 hz, 1 hp capacity, single phase	5	unit
14	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	4	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
15	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase	4	unit
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	<p>8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio;</p> <p>Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style</p>	1	unit
9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal</p> <p>Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p> <p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh liPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p>	1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual) Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720 Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure Photo: JPEG, DNG (RAW), JPEG + DNG Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265) Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required Charger Voltage: 17.4 V		
10	DSLR Camera	Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC	1	unit
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large	12	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		15 ml capacity		
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 ml Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 ml Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm)	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Gen. Santos National School of Arts and Trades – Tiongson St., Lagao, General Santos City				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight		
16	Ammeters	Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories	5	set
17	Biological Microscope	Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see Basic condenser concentrates light onto the specimen Adjustable arm (0° to 60°) for comfortable viewing	1	unit
18	Thermometer	Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C With permanently fused markings, packed in protective sleeving	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 3. Aquaculture				
1	Dissolve Oxygen Meter	Display Type: LCD DO Measurement: 0 - 45 mg/L Temperature Compensation: -5 to 50°C	4	unit
2	Salinity Refractometer	Type: nalog Specific Gravity (SG): 1.000 - 1.070 Measurement Range: 0 to 100 %	5	unit
3	Soil PH Meter	Meter Type: Portable pH Range: 0 - 14 pH pH Resolution - ± 0.2 pH Humidity Range: 0 to 8%	5	unit
4	Water Thermometer	Meter Type: Digital Display Type: LCD Measuring Range: -200 to 1,370°C Resolution: 0.1°C, 1°C	4	unit
5	Digital Water PH Meter	Meter Type: Digital Display Type: LCD Measurement Range: -2 to 16 pH Resolution: 0.01 Accuracy: ± 0.1 Temperature Compensation: -10 to 120°C	4	unit
6	Secchi Disk	Type: Portable Size: 20 cm diameter with black and white sections - with calibrated line marked every half meter up to 20 meters	5	unit
7	Water Quality Test Kit	Test Range Ammonia Nitrogen: 0 - 3 ppm (mg/L) Nitrite Nitrogen: 0 - 0.8 ppm (mg/L) pH: 4 - 10 Alkalinity: 0 - 4000 ppm (mg/L) Carbon Dioxide: 0 - 100 ppm (mg/L) Chloride: 0 - 400 ppm (mg/L) Dissolved Oxygen: 0 - 20 ppm (mg/L) Total Hardness: 0 - 4000 ppm (mg/L) Temperature: -5 - 50°C	4	unit
8	Multiparameter Meter System	Meter Type: Portable/ Electrode Display Type: LCD Water Proof USB Connectivity pH Range: 0 - 14 Salinity Range: 0 - 70 Dissolved Oxygen Range: 0 to 50 ppm Temperature Range: -5 to 105°C	2	unit
9	Eckman Dredge	Material: Stainless Steel Sampling Area: 6" x 6" Inclusive of the following accessories: Messenger Steel Aircraft Cable (100 meters)	4	unit
10	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power: 220 V, output current: 200 Ampere	4	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100	2	unit
12	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit
13	Grass Cutter	Engine Type: 4 Stroke Fuel: Gasoline Displacement: 35.8 cc Fuel Tank: 630 ml - 700 ml	4	unit
Lot 14. Information and Communication Technology				
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit
4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit
5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit
7	Multimedia Projector		1	unit

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style	1	unit
9	Drone	Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km) Battery: 6000 mAh liPo 2S	1	unit

**Procurement of Training Tools and Equipment for the Higher Level
DAC Qualification of the 23 CenTexs**

Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte

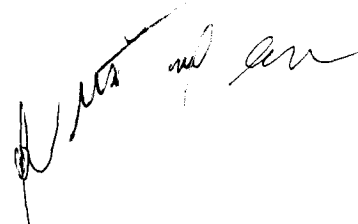
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC</p>	1	unit
Lot 15. Science Lab (Chemistry and Physics)				
1	Graduated Cylinder	Polypropylene (plastic) material	10	pc

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		10 ml capacity		
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc
3	Test Tubes	Glass material Large 15 ml capacity	12	pc
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc
5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc
7	Beaker	Durable glass material 250 m Borosilicate	5	pc
8	Erlenmeyer Flask	Durable glass material 250 mi Borosilicate	3	pc
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc
12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc
14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set
15	Vernier Caliper	Science ware Digi-MAX Double scales	10	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT
		<p>Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value</p> <p>Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight</p>		
16	Ammeters	<p>Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories</p>	5	set
17	Biological Microscope	<p>Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x</p> <p>Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see</p> <p>Basic condenser concentrates light onto the specimen</p> <p>Adjustable arm (0° to 60°) for comfortable viewing</p>	1	unit
18	Thermometer	<p>Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion</p> <p>Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C</p> <p>With permanently fused markings, packed in protective sleeving</p>	7	pc
19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box
20	Safety Gloves	Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch	5	pack
21	Test Tube Brush	<p>300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop</p> <p>Bristles approximately 25 mm (1 inch) diameter</p>	5	pc
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs				
Northern Mindanao School of Fisheries – Matabao, Buenavista, Agusan del Norte				
NO.	ITEM	AGENCY SPECS	QTY	UNIT

Lot 16. Surveying Equipment				
1	Total Station Surveying Equipment	<p>3.5" Large Dual Touch-screen HD Display Android Smartphone as data collector EDM Trigger, automatically measurement key 500 Meters long range reflector less 200,000.00 points memory data upload/ download Complete surveying/ construction/ road programs on board</p> <p>Electronic Bubble; direct data plotting on main screen</p> <p>Alphanumeric Keys for easy and quick data input MS Windows Compatible; GPS data ready Data Text, DXF, CSV/ AutoCAD ready</p> <p>Telescope - Length: 125 - 152 mm - Magnification: 30x - Image: Erect - Field of View: 1°20' - 1°30' - Resolve Power: 3" - Min. Focus Distance: 1.3 - 1.7 m</p> <p>Measurement Range: 1.5 to 5,000 meters</p>	1	unit



Section VII. Technical Specifications

Technical Specifications

Item	Specification	Statement of Compliance.
	See attached Technical specifications	



Lot 1. Agricultural Crops Production NC III				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Farm Tractor	4 wheel drive with the following specifications Engine: direct injection, vertical, water- cooled 4 cycle diesel No. of cylinder: 3 - 4 Engine gross power: 35 -50 hp Rated revolution: 2200 - 2700 rpm Hydraulic system: position control with attachment of any of the following: disc plow, disc harrow, rotary tiller, & trailer		
2	Rice Combine Harvester	Engine: 50-70 hp water-cooled diesel engine Travelling speed: 0-0.97 m/sec (low), 0-1.91 m/sec (high) Cutting width: 2,000 - 3,000 mm Threshing system: axial-flow type Harvesting capacity: 0.1 - 0.8 ha/hr		
3	Corn Sheller	Capacity: 1-5 tons per hour (@50 kg/cavan) Shelling Recovery: 95 - 99% Power Requirement: 7 - 14 hp diesel engine		
4	Double Pass Rice Mill	300 - 1500 kg/hr (10 - 30 cavan/ hr)		
5	Grain Moisture Meter	Measuring Range: Corn, 8-36% MC Measuring Range: Palay, 9-40% MC Accuracy: $\pm 0.2 - 0.5$ % MC (10-20%) Power source: AC/DC (battery-operated)		

6	Hand Tractor	Power requirement: 6 - 10 hp Overall length: 1500 - 2700 mm Overall width: 750 - 1200 mm Overall height: 800 - 1150 mm With attachments of any of the following: disc plow, harrow, and cage wheel		
7	Mechanical Rice Transplanter	Engine: Air-cooled, 4-stroke Power requirement: 1.5 - 4.5 kW Planting row: 4 rows Row distance: 30 cm Planting capacity: 1 - 1.5 ha/day		
8	PH Meter	Range: 0 - 14 pH Moisture: 0 - 10% (0-100%) Resolution: 0.01 - 0.2 pH Type: Portable/ pen-type		
9	Single Cylinder Diesel Engine	Water-cooled, horizontal, single-cylinder, 4-stroke diesel engine horsepower: 7 - 14 hp		
10	Thresher	Construction: all steel Power requirement: 10 - 14 hp		
11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 2. Agricultural Mechanization				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Mechanical Dryer Recirculating Type	Capacity (Kg): 6,000 to 10,000 Loading Rate: 25 - 75 min Unloading Rate: 15 - 75 min Drying Rate: At least 0.5% - 3% per hour		
2	Walker Behind Vibrator Roller Compactor	Double drum Operating Weight 550 - 800 kgs Engine: Diesel or Gasoline Engine at 6.0 to 18 hp Travel Speed: 2 km/hr - 7.5 km/hr. Centrifugal Force: 15 KN to 25 KN.		
3	Rice Combine Harvester	At least 70 Horse Power Diesel Engine; Speed harvesting at 1.85 meters/second 2.00 to 3.00 meters cutting width		
4	Agricultural/ Farm Tractor Four Wheel Drive (90 -120 Hp) with Three (3) Point Hitch Linkage	Engine Power: 90 -120 hp with Rated Engine Speed of at least 2100 Rev/Min Number of Engine Cylinder: 4 - 6		

5	Rotavator/ Rotary Tiller - Four (4) Wheel Tractor Mounted	Mounted within 50 - 100 hp Agricultural/ Farm Tractor Working Width of 2000 mm and at least 44 blades working at 2100 rpm engine speed		
6	Four Bottoms Disc Plough, Four (4) Wheel Drive Tractor Mounted	Mounted to the Agricultural Tractor Power with 60 to 120 hp Tractor Working Width 1000 - 1600 mm Number of Disk: 4 Disk Diameter: 500 - 700 mm		
7	Engine Operated Chainsaw	Engine: Gasoline type Power Output: at least 5 hp (3.7 kw/ 4.8 bhp) Bar Length at least 20 inches		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 3. Aquaculture				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Dissolve Oxygen Meter	Display Type: LCD DO Measurement: 0 - 45 mg/L Temperature Compensation: -5 to 50°C		
2	Salinity Refractometer	Type: Analog Specific Gravity (SG): 1.000 - 1.070 Measurement Range: 0 to 100 %		
3	Soil PH Meter	Meter Type: Portable pH Range: 0 - 14 pH pH Resolution - ± 0.2 pH Humidity Range: 0 to 8%		
4	Water Thermometer	Meter Type: Digital Display Type: LCD Measuring Range: -200 to 1,370°C Resolution: 0.1°C, 1°C		
5	Digital Water PH Meter	Meter Type: Digital Display Type: LCD Measurement Range: -2 to 16 pH Resolution: 0.01 Accuracy: ± 0.1 Temperature Compensation: -10 to 120°C		

6	Secchi Disk	Type: Portable Size: 20 cm diameter with black and white sections - with calibrated line marked every half meter up to 20 meters		
7	Water Quality Test Kit	Test Range Ammonia Nitrogen: 0 - 3 ppm (mg/L) Nitrite Nitrogen: 0 - 0.8 ppm (mg/L) pH: 4 - 10 Alkalinity: 0 - 4000 ppm (mg/L) Carbon Dioxide: 0 - 100 ppm (mg/L) Chloride: 0 - 400 ppm (mg/L) Dissolved Oxygen: 0 - 20 ppm (mg/L) Total Hardness: 0 - 4000 ppm (mg/L) Temperature: -5 - 50°C		
8	Multiparameter Meter System	Meter Type: Portable/ Electrode Display Type: LCD Water Proof USB Connectivity pH Range: 0 - 14 Salinity Range: 0 - 70 Dissolved Oxygen Range: 0 to 50 ppm Temperature Range: -5 to 105°C		
9	Eckman Dredge	Material: Stainless Steel Sampling Area: 6" x 6" Inclusive of the following accessories: Messenger Steel Aircraft Cable (100 meters)		

10	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power: 220 V, output current: 200 Ampere		
11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100		
12	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase		
13	Grass Cutter	Engine Type: 4 Stroke Fuel: Gasoline Displacement: 35.8 cc Fuel Tank: 630 ml - 700 ml		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 4. Automotive Servicing

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Parts Washer	Drum: Inside dimensions - 7" H X 28" W X 22" D Fluid Requirements: 10 gallons Input: 120 V/ 220VAC (60 Hz) Pump Volume: 210 GPH Output Pressure: 50 PSI Dimensions: 35" X 31" X 23" Open Height: 60"		
2	Tire Changer	Inside clamping: 13 - 26" Outside clamping: 11 - 24" Voltage: 220 V Motor Power: 0.75 kw/ 1.1 kw HP: 1 Operating Pressure: 90 psi		

3	Roller Cab/ Trolley Tool Set	5 Drawers Roller Cab with the following tool set: 1 set Screwdriver L-shape Wrench 1 set Double-open-end wrench 1 set 45 deg. Double wrench set 1 set Ratcheting combination wrench set 1 set Adjustable wrench set 1 set Standard pliers set 1 set Circlip plier set 1 set Impact socket set 1 set 3/8" Square drive socket set 1 set 1/4" Square drive socket set 1 set 1/2" Square drive socket set		
4	Lifter Wheel Aligner	Design: Scissor Lifting Capacity: 3500 - 5000 kg Lifting Height: 1700mm Motor: 220V/ 50 Hz		
5	Electronic Battery Tester	Battery Nominal Voltage: 12 V CCA : 125 A to 1400 A SAE/EN: 200 A to 900 A DIN/ IEC: 120 to 550 3-4 digit LED display		

6	Car Wheel Balancer	Power supply: 220 V/ 380 V Measuring time: 8-20 sec. Max. rim diameter: 10" - 24" Balancing speed: 42 - 220 rpm Max. rim width: 1.5" - 20" Max. wheel weight: 65 kg Balancing accuracy: $\pm 5g$		
7	Global Diagnostic System (GDS) Professional Scanner	CPU: Dual Core 1 GHz Battery: 3000mh, rechargeable Extension Memory Card: 32 G Memory: 512 MB LCD: 7.0 inch LCD Resolution: 1024 x 600 Screen: capacitive touch screen Cameras: 2 mega rear and 0.3 mega front		
8	Front Wheel Alignment Trainer	Included item: Original vehicle steering wheel Camber caster steering axis inclination A set of two wheels- turntable with gauges allows for measurement of the degree of turn on both sides of zero (for calculation of toe-in & toe-out) Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out.		

		<p>Technical Description:</p> <ol style="list-style-type: none"> 1. The trainer consists of an original front end unit from a typical passenger vehicle. 2. It has been modified for quick adjustment of all alignment and steering geometry points. 3. The unit is mounted on a special stand which facilitates alignment procedures and utilization of test equipment and accessories. The trainer comes with two wheel rims with tires. <p>Additional recommended accessories or options:</p> <p>Original vehicle steering wheel</p> <p>Camber/ caster steering axis inclination gauge</p> <p>A set of two wheel turntables with gauges allows for measuring of the degree of turn on both sides of zero for calculation of toe-in and toe-out</p> <p>Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out</p> <p>The following topics are covered in the instruction program:</p> <p>General theory on suspension and steering system including different types and geometry principles.</p> <p>Pre-alignment check procedures: tire pressure and wear, front wheel bearing play and adjustment, ball joint play inspection, shock absorber wear, steering gear looseness</p>		
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		<p>Caster: determination, adjustment and correction</p> <p>Camber: determination, adjustment and correction (positive and negative)</p>		
9	Anti-Lock Braking System with Traction Control System (TCS)	<p>The major components included are:</p> <p>Four rotating wheels with wheel sensors, with digital speed display for each wheel (4 digital displays);</p> <p>4 variable speed electrical drive systems for each wheel to control the individual speed of each wheel, master brake cylinder with pedal handle;</p> <p>ABS hydraulic actuator (modulator) unit which is controlled by the on-board computer system (ECU);</p> <p>Five brake line pressure gauges to show the pressure differentials from the master brake cylinder to the individual wheels;</p> <p>Brake Master Cylinder with Vacuum assists boosts mechanism and brake pedal assembly;</p> <p>The front of the trainer features precise schematic color graphic illustrations that clearly explain the operation of the entire ABS and braking system;</p> <p>A control panel is provided with an on/ off power switch, power system light (POWER</p>		

		<p>ON), ABS warning light (indicated problems) and an ABS operational light (ABS ON). Also has Volt and Ampere meters to measure the DC input power and a brake light to show the operation of the braking system just as on the vehicle;</p> <p>Special Road Conditions and Performance Display Panel;</p> <p>Optional Electronic Fault insertion panel and Electrical Test Point;</p> <p>The trainer comes complete with a training course on ABS operation and servicing including student job sheets and a technical manual on ABS systems;</p> <p>A series of options to enhance the trainer such as fault insertion systems, power supplies and additional instructional materials, vacuum pump for power brake boost;</p> <p>Power Source: Note that 30A, 12 Volt DC power source is required from the shop to operate the trainer. If none is available an optional 12 VDC power supply can be ordered to provide this correct power</p>		
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10	Half-Cut AUV Engine Management System	<p>Electrical control gasoline engine assembly, auto fault</p> <p>Automatic transmission assembly Electrical and electronic devices such as: ECM, TCM, AFS, CKP, CMP, O2 sensor, WTS, control relay and etc.</p> <p>Injector, filter, fuel tank, fuel pump, fuel equipment, DC 12 V/ 60 A, battery 12 volts</p> <p>Ignition coil built -in, spark plug, high voltage resistant cables</p> <p>Cooling system: radiator, overflow tank Exhaust system: Catalytic converter, Emission, Silencer</p> <p>Ignition switch with key Anti-vibration dampers and a urethane wheels Control box, fuel tank, accelerator lever Automatic transmission oil pressure gauge for each singular (1.5MPA*83,2.5 MPA*4)</p> <p>Vacuum pressure gauge (1 MPA) Fuel pressure gauge Battery voltage gauge (30 V)</p> <p>Note Includes : training manual/ module</p>		
11	Airbag System Trainer	<p>The trainer consist of the following components:</p> <p>Sectioned steering wheel with deployable and reusable airbag</p>		

		<p>Pressure regulator with air filter, solenoid valve and compressed air connection</p> <p>Airbag system circuit diagram with connection and test points</p> <p>Set of two mm test connection leads</p> <p>Inflator unit</p> <p>Rear cable unit</p> <p>SRS control unit</p> <p>Airbag simulator with graphic and LED display</p> <p>Crash switch simulation system</p> <p>Dash sensor unit</p> <p>Fuse</p> <p>Power indicator light</p> <p>Ignition switch</p> <p>Technical Parameters:</p> <p>The steering unit with a typical restraint unit. Additional components and controls are mounted on the board to complete the system such as the impact crash sensor and controls. The airbag operation is demonstrated and realistic faults are also introduced to show typical problems in the units.</p> <p>A typical electronic circuit for the SRS system is incorporated into the trainer. This can be used also for realistic fault simulation to show typical problem in the units. After the circuit is connected, the airbag operation is both simulated via LED graphic display that shows the detonation and deployment of the air bag</p>		
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		<p>system in a simulated crash situation. And also the airbag deploys, synchronized with the LED graphic display unit, through the use of compressed air and a pressure regulator. The trainer comes with a comprehensive manual covering the operation of the trainer.</p>		
12	Gas Tester	<p>The pump consists of a diaphragm with one way valve and thus the pump will only be heard to click when connected to the exhaust</p> <p>CO Function Specification:</p> <ul style="list-style-type: none"> - Calibrated range: 0-10% CO - (indicates un-calibrated to 20% C) - Accuracy: +/-0.5% CO typical - (throughout the indicated range 0.5% CO to 6.5% CO) <p>Kit Contents:</p> <ul style="list-style-type: none"> - Gas tester instrument including collector box and pulse pump/ water trap assembly - Metal exhaust probe with retaining springs - Flexible plastic pipes (3 lengths) - Instruction handbooks 		

13	Recovery Machine	<p>Compact and Lightweight</p> <p>40% smaller footprint, easy to carry, weighing in at 18 lbs</p> <p>Oil-less compressor Capable of recovering both liquid and vapour</p> <p>Handles almost all refrigerants Works with all common CFC, HFC, HCFC Refrigerants including R-410A</p> <p>High efficiency cross flow design Lay-out of fan and condenser is maximized for shorter cycle times</p> <p>High pressure safety shut-off switch Automatically shuts off machine if pressure rises above PSI</p> <p>Easy to operate Rugged case</p> <p>Easy to read gauges, comfortable handle and simple 2 valve controls IEC connector and power cord</p>		
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14	Brake Fluid Exchanger	Remove and replace fluid from most types and models of vehicles' brake system. Also removes trapped air		
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Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

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Lot 5. Electrical Installation and Maintenance NC III

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Electrical Motor Control Learning System	<p>This system teaches operation, installation, applications and troubleshooting of electric relay type motor control systems. The system contains the following items: Workstation Console, set of Control Stations, Hand-held Multimeter, Lead Set, Electric Motor, Motor Mounting Frame, Student Curriculum, and Instructor's guide.</p> <p>The following stations is supplied: Safety Switch Power Station (1 pc fused 3-phase safety switch, 2 pcs. Padlocks, 2 pcs. Safety tags, 4 pcs. Banana jacks, 1 pc Pre-attached power cord 4 poles, 5 wires, 1 pc. Lockout/Tagout mechanism, 1 pc. Fault Module with 2 faults, 1 pc. Mounting unit for right angle orientation to trainer), Operator Station (1 pc. Green flush push button (1 N.O., 1 N.C.), 1 pc. Black flush push button (1 N.O., 1 N.C.), 1 pc. Red mushroom push button (1 N.O., 1 N.C.), 1 pc. Three position selector switch (2 N.O.), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc 5-way binding post (ground), 1 Fault Module with 5 faults), Indicator Lamp Station (1 pc. Green indicator lamp, 1 pc. Push to test red indicator lamp, 1 pc. Yellow indicator lamp, 1 pc. 24 inch/ 61 cm green stackable banana lead, 7 pcs. 5-way binding posts (ground), 1 pc. Fault Module with five (5) faults), Control Transformer Station (1 pc. 250VA control</p>		

		<p>transformer with protective cover, 1 pc. Dual fuse block with protective cover,</p> <p>4 pcs. 1.25 AMP class CC fuses (2 installed, 2 loose), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with three (3) faults), Reversing Contactor Station (2 pcs. 4 pole contactors, 1 pc Mechanical/ electrical interlock, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post ground, 1 pc. Fault Module with 5 faults), Overload Relay Station (1 pc. A-B overload relay, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 3 faults), Manual Motor Starter Station (1 pc. manual starter, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground)), Multifunction Timer Station (1 pc. Multi-function timer with: on delay, off delay timing, interval, single shot timing, repeat cycle timing, pulse timing, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 4 faults), Drum Switch Station (1 pc. three phase reversing drum switch, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), Limit Switch Station (2 pcs. Industrial grade limit switch (SPDT), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 3 faults), Control Relay Station (2 pcs. Four pole relays (2 N.O. / 2 N.C.), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module</p>		
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	<p>with 5 faults), Pressure/ Float Switch Station (1 pc. Pressure switch (SPDT), 1 pc. Float switch (N.O. or N.C.), 1 pc. 24 inch/ 61cm green stackable banana lead, 1 pc. 5-way binding post (ground), Motor Connection Station (1 pc. Multi-pin industrial motor connector, 5 pcs. Red banana jacks, 5 pcs. Yellow banana jacks, 1 pc. Fault Module with 3 faults), Hand-Held Digital Multi-Meter, Stackable Banana Lead Set - 50 Leads, 3 Phase Induction Motor A 1/3 HP, NEMA 56 Frame machine rated at 208-230/460 Volts, 3 phase, Windings accessible through a multi-pin connector. To include: 1 pc. Motor mounting plate, 1 pc. Single end shaft for safety, 1 pc. Motor winding identification escutcheon, 1 pc. Fault Module with (2) winding faults.</p> <p>Motor Mounting Frame Is heavy duty steel frame construction, with pre-drilled holes for mounting of two motors, prony brake, electric brake, and flywheel. Minimum dimension is 27" W x 12" L x 4" H. The mounting surface is made of .125 in steel plate min, painted and silk-screened.</p> <p>Prony Brake A shaft torque measurement and load device. It consist of a formed steel gauge unit, aluminum brake drum with mounting for 5/8 inch motor shafts, balanced pulley, spring force gauge, load adjustment knob, double set screw locking device, coolant spray bottle. Load range is 0 - 3.05 N-m</p>		
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up and down

		<p>HAND TOOL PACKAGE:</p> <p>FAULT TROUBLESHOOTING SYSTEM (This system consist of a computer-based fault controller, (2) ribbon cables, (1) computer managed software, (1) installation/operation manual. This system is designed and programmed so that students can connect the system to a wide variety of industrial controls training systems to provide a means by which faults can be automatically inserted into a training system to provide student practice in troubleshooting the system. The characteristics of the system should be as follows: Fault Controller</p> <p>(Includes enclosure with 35 fault relays, 10A 115/230 VAC rating, 35 cables, ribbon cable for connection to a host computer, computer-based controller, internal power supply, 120/230 VAC 50/60 Hz.), Student Curriculum</p> <p>(The student curriculum consist of (1) set of 10 Learning Activity Packets 73 skills in electric motor control. The topics covered includes: motor starters, reversing starters, overload relays, motor start/ stop control, control transformers, magnetic motor starters, two wire control, three wire control, sequence control, jogging, on and off delay timing, sensor switches, and motor timer control. Students will learn installation, operation, schematic reading, circuit design, and troubleshooting), Teacher's Assessment/ Portfolio Guides (A teacher's</p>		
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		guide is provided. It contains student data sheets, data sheet solutions, self-review answers, quizzes, quiz answers, student skill record sheets, and authentic assessment. A quiz is provided for each packet. A question is provided in each quiz for each cognitive objective taught. All tasks listed in the packet is listed on personalized student record sheets. The Instructor's Package includes directions for authentic skill assessment.)		
2	Variable Frequency AC Drive Learning System	<p>Variable Frequency AC Drive Station</p> <p>Shall include the following:</p> <p>1 pc. Variable Frequency AC Drive with (Built in control keypad, Ability to program 30 different operating parameters, Capability of displaying 10 different operating conditions, Shall be capable of operating 3-phase motors from a single-phase supply, Ability to accept commands from four (4) different sources: Keypad, External pot, 4-20mA Signal, \pm 10-90 VDC signal, Built in fault diagnostics, DC injection braking capability, PWM type output with adjustable carrier frequency (2 to 8 kHz), Provisions for addition of an external Dynamic Braking resistor, 1 pc. Two position fuse block with fuses, 3 pcs DPST push button switches, 3 pcs. SPDT toggle switches, 1 pc. 3 PST keylock safety switch, 1 pc. Potentiometer with 10 turn indicating dial, 1 pc. Fault Module with 5 faults)</p>		

		<p>Motor Connection Station (Shall include one of plug-in connections for a 3-phase motor)</p> <p>Student Curriculum or Manual and with Teacher's Assessment/ Portfolio Guides</p>		
3	Electrical Instruments	Measuring <ul style="list-style-type: none"> • Phase Sequence Indicator (Indication of the three phase via LCD, Indication of the phase rotation direction via LCD, Swift determination of the phase sequence in three phase) • Voltage Range: 40 to 700 V • Frequency range: 15 to 400 Hz • Safety Complying with: IEC 61010/EN61010, IEC61557-7/EN61557-7 • Current Consumption: approx. 1 mA @ 700 V • Digital Storage Oscilloscope (4 channel, 60 MHz, 5V/div Maximum vertical sensitivity, 2mV Minimum vertical Sensitivity 50s/div Maximum time base, 5ns/div minimum time base, TFT LCD, 2mV minimum vertical sensitivity) • Clamp Meter Features and Benefits (Peak hold, Switchable low pass filter, TRMS measurement) • Troubleshooting of RCD nuisance tripping (Periodic measurement of leakage current @50 Hz to check for insulation deterioration, Accurate measurement of triple neutral current and other distorted waveforms, Differential current measurement for appliance testing, Auto ranging) • Safety category voltage: 300 V, 600 V, 1000 V, Safety category level: CAT II, CAT III, CAT IV • Absolute maximum resistance: 600k Ohm 		

		<ul style="list-style-type: none"> • AC current measurement resolution: 0.001mA • Best AC Current Accuracy: 1% + 8 digits, Best AC Voltage Accuracy: 1 % + 3 digits, Best DC Voltage Accuracy: 1 % + 2 Digits • Tachometer (Optical and Mechanical measurement of rotation speed, Rotation speed, speed and length measurement, Memorization of min. and max. values as well as the last value at power down, Automatic Stop • Rotation speed: 1.00 to 99,999 rpm optical, 1.0 to 19,999 rpm mechanical • Speed: 0.10 to 1999 m/min. • Accuracy: +/- 0.02% full scale (=/- 1 digit) 		
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4	PLC Motor Control Learning System	<p>11-Gauge Steel Panel featuring:</p> <ul style="list-style-type: none"> • Compact PLC- Micro Logix 1000 or 1200 PLC • 16 digital Input-24Vdc • 12 digital output relay • Power input; 220-240-VAC / 60Hz. • Connecting cables (300/ 1m. long) • AC Inputs (10) • Relay Outputs (6) <p>Accessories:</p> <ul style="list-style-type: none"> • Programming cable software • Power input- 220 V/ 60 Hz • Simulator: 24 VDC • 1 green push button (N.O.) • 1 red push button (N.C.) • 2- 3PSP Selector switch <p>Output simulator:</p> <ul style="list-style-type: none"> • Buzzer 24 VDC • 10 indicator lamp/ 24 VDC • Short circuit protection features; <p>Mounting required: Panel type w/ aluminum frame stand</p> <p>Student Curriculum and students manual</p>		
5	Reduced Voltage Starting Learning System	<p>Each station includes the following components:</p> <p>Power Resistor Station (3 pcs.) Power Resistor Stations - (3 pcs.) 25 ohm, 100 watts</p> <p>Dual Transformer Station (2 pcs.) Control Transformers (250VA minimum) multiple tap primary (208, 277, 380</p>		

		(VAC) single tap secondary (120 VAC) and with; Student Curriculum or Student manual		
6	Electrical Machines Learning System	<p>Assembly system for rotating electric machines It includes the following components: Base plate, Supports with bearing, Coupling joints, Flexible coupling, Electronic speed transducer, Assembling screws, Wrenches, DC stator, AC stator, Rotor with commutator, Brush holder with 2 brushes, Cage rotor, Ring rotor, Brush holder with 6 brushes</p> <p>POWER SUPPLY Outputs in AC:</p> <ul style="list-style-type: none"> • Three-phase: 24 V/ 14 A, 42 V/ 10 A • Single-phase: 0 – 48 V/ 5 A, 0 – 10 V/ 12 A <p>Outputs in DC:</p> <ul style="list-style-type: none"> • 32 V/ 14 A, 42 V/ 10 A, 0 – 40 V/ 5 A, 0 – 8 V/ 12 A <p>Three-phase power supply from mains.</p> <p>LOADS AND RHEOSTAT</p> <ul style="list-style-type: none"> • resistors: 3x15 Ohm, 90 W each, 1 Ohm + (0 – 2 Ohm), 80 W 		

		<ul style="list-style-type: none"> • capacitors: 3 x 80 μF, 150 V • rheostat: 0 - 80 Ohm, 1 A <p>ELECTRICAL POWER DIGITAL MEASURING UNIT</p> <p>Measurement in direct current of: voltage, current, power and energy.</p> <p>Measurement in alternate current of: voltage, current, power, active energy, reactive energy, apparent energy, cos phi and frequency.</p> <p>Main technical features:</p> <ul style="list-style-type: none"> • DC voltage: 300 VDC • DC current: 20 ADC • AC voltage: 450 VAC • AC current: 20 AAC • Power: 9000 W • Power supply: single-phase from mains • Communication: RS485 with MODBUS RTU protocol. <p>ADAPTER BRACKET</p> <p>Necessary for connecting the locking device, the brake or the drive motor.</p>		
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7	Pneumatics & Electro-Pneumatic Training Set	<p>The Electro-pneumatic training set includes basic pneumatic training components. The user can train on the basics of electro-pneumatic control.</p> <p>Training Contents:</p> <ol style="list-style-type: none"> 1. Physical principle of electro-pneumatics 2. Function of electro-pneumatics training set 3. Relay control circuit 4. Electric self-holding circuit 5. Feature of magnetic proximity switch 6. Electric sequence control circuit 7. Step diagram <p>Consist of:</p> <ol style="list-style-type: none"> 1. Push button switch set 2. Relay 3-fold - 2 Units 3. Limit switch electrical, left and right actuated 4. Optical sensor 5. Electric proximity switch 6. 3/2 way solenoid valve (N/C) 7. 5/2 way single solenoid valve - 3 units 8. 5/2 way double solenoid valve - 3 units 9. Pressure switch 10. One-way flow control valve - 4 units 		
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Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 6. Food Processing				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Food Processor	Heavy Duty, 5 liters, stainless steel bowl, 220 V/ 60 Hz, 1 Hp		
2	Water Boiler	30 liters capacity, stainless steel, 220 V/ 60 Hz		
3	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase		
4	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase		
5	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000		
6	Dehydrator	single chamber, 15 trays, stainless steel, 220 V/ 60 Hz		
7	Exhaust Hood	60 cm width; heavy duty; stainless steel; wall mounted		
8	Smoke House	1 door, 220 V/ 60 Hz, single phase, Dimension: 0.440 m ³ - 1.62 m ³		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 7. CNC Lathe and Milling Machine Operation NC III

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	CNC Milling Machine	<p>General Specifications: CNC Vertical Milling Machine Table Size: Length 750 mm - 1000 mm; Width 350 - 550 mm, Table Load Capacity: 500-1400 kg, Travel X-axis: mm - 850 mm, Y - axis: 400 mm - 600 mm, Z - axis: 500 mm - 600 mm, Maximum Spindle speed: 8,000 - 12,000 rpm; Direct Drive, Spindle Taper: BT 40, Tool Storage Capacity: 20 tools - 30 tools only, Electricals: 220 volts / 3 phase / 60 Hz, Spindle Motor Power: 20 hp - 30 hp, Max Rapids on (x, y, z): 25.4 m/ min - 42 m/ min; Servomotors on all axes, 4th Axes Drive and wiring, Coolant system, Max tool diameter: 80 -95 mm, bearing lubrication: air / oil/ grease injection</p> <p>Important features Included:</p> <ul style="list-style-type: none"> • 3 Units External CNC CONTROLLER SIMULATOR (Stand-alone exact replica (duplicate) of the CNC Controller of the machine for off-machine training on CNC programming, operation and simulation) • 4th Axis Rotary Table (Can be mounted horizontal / vertical, Worktable diameter: 160mm -350mm diameter, Accuracy: ± 15sec, Servo Motor, complete with accessories) <p>Machine Accuracy & Control Specifications</p>		

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	<ul style="list-style-type: none">• Control type - Dialog, Conversational/ Intuitive Programming Sys. /EIA/ ISO PROGRAMMING• Working Memory - 2 mb up to 1 gb <p>Minimum features and accessories included:</p> <ul style="list-style-type: none">• Fully enclosed machining center• USB port• ethernet interface• Automatic tool length measuring device/ Touch probe• Automatic voltage regulator 30KVA, 3 Phase, 220V• Air Compressor• Specified machining tool list:• 1 pc Drill Chuck• 1 pc Drill Chuck arbor BT 40• 5 pcs Quick Change Milling (Collet) Chuck• 10 pc pull studs• 15 pc Collets (3-25 mm)• 1 pc Face mill arbor• 20 pcs Carbide Inserts• 1 set HSS End mills• 1 set HSS Drill Bits• 1 pc BT 40 Spindle taper cleaner• 1 pc mill vise• Coolant (pail) - 1 pc.• With operations/ maintenance manual in English Language• 1 year warranty for spare parts and 2 years in support service• Includes Machine Commissioning and Training		
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2	Lathe Machine (Conventional)	<p>General Specifications: Horizontal Lathe Capacity</p> <ul style="list-style-type: none"> • Max swing over bed: 380 mm - 560 mm • Max swing over gap: 600 mm - 780 mm • Max swing over cross-slide: 200 mm - 380 mm • Distance between centers: 1000 mm • Bed width: 220 mm - 350 mm • Cross slide travel: 230 mm - 300 mm <p>Main Spindle</p> <ul style="list-style-type: none"> • Spindle bore: $\Phi 50$ mm - $\Phi 80$ mm • Max Spindle speed: more than 1600 rpm <p>Tailstock</p> <ul style="list-style-type: none"> • Tailstock spindle taper: MT 3, 4 or 5 <p>Threading</p> <ul style="list-style-type: none"> • Metric pitch threads: 0.2-14 mm/ pitch • Inch pitch threads: 2-75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds: 0.04-1 mm/rev • Range of cross feeds: 0.02-1.25 mm /rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply: 220 volts 60hz • Phase: 3 phase • Main spindle motor: 5 - 10 hp • Coolant pump motor: 1/8 hp <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck, 4 Jaw chuck , Face plate • 1 pc - live center , dead center • 1 pc - Steady rest, follower rest • 1 set - lathe dog (straight and bend tail) • 1 set tool holder (left hand, right hand, neutral & threading tool) • 1 pc - drill chuck with arbor 		
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		<ul style="list-style-type: none"> • quick change tool post • with Operations/ maintenance manual in English • With Digital Read Out • with sleeve for MT 4 and MT 5 Machines • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 		
3	Milling Machine (Conventional)	<p>General Specifications: Vertical Turret Type Milling Machine</p> <ul style="list-style-type: none"> • Table Size: Length 1270 mm x Width 254 mm • Longitudinal Travel (x): 800 mm - 950 mm • Cross Travel (y): 305 mm - 410 mm • Vertical Travel (Knee) (z): 305 mm - 410 mm • Max work piece weight: 300 - 400 kg • Spindle Motor: 2 hp to 3 hp • Maximum Spindle Speed: 2500 rpm -5500 rpm • Electricals: 220 V/ 3 phase/ 60 Hz <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 set - Dividing Head gear ratio 40:1 w/ sets of gear, footstock, 3 indexing plates, sector arm • 2 sets of module cutter (mod 1.5, 2.0, 2.5) • Spindle Arbor/ Milling Arbor • with operations/ maintenance manual in 		

		<p>English Language</p> <ul style="list-style-type: none"> • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 		
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Name of Bidder: _____

Name and Signature of Authorized Representative: _____





Position/Designation: _____

Date: _____

Lot 8. Welding				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	SMAW/ GTAW Welding Machine	<ul style="list-style-type: none"> • Input power: voltage/ Phase/ Hertz: 208 -230/ 1/ 50/ 60 • Output range: 40-300A AC/DC • Duty cycle: at least 40 - 60% • Output Current Voltage (OCV): 50 - 80 V • With Built - in High Frequency • with Maintenance / Operation Manual in English Language • Complete accessories: Electrode holder, heavy duty Heavy duty ground clamp TIG torch assembly Gas regulator with remote control (foot/hand) Power cables and welding cable 		
2	GMAW/ FCAW Welding Machine	<ul style="list-style-type: none"> • Process: GMAW, Flux Cored AW • Max. Open Current Voltage (OCV): 38 - 70 V • Wire speed: 50 – 700 IPM • Wire size range: 0.8 – 1.2mm • Complete accessories: MIG gun, Heavy duty ground clamp and cable, 230V input power cable, Adjustable Gas regulator/ flowmeter and hose • Amperage range: 30-300 A • Rated output: Current/ voltage/ duty cycle 250A/ 26V/ 40% • Input power: voltage/ Phase/ Hertz: 208 -230/ 1/ 50/ 60 		

3	Plasma Cutter	<ul style="list-style-type: none"> • Maximum Cutting Capacity: 22.2 mm (7/ 8") • Input Power: 208-575 V/ 1/ 3 P/ 50/ 60Hz • Rated output: 96-104V @ 40-50% duty cycle • Input Current: 37.8 - 60 A • Output Range: 20 - 60 A • Complete accessories: Hand torch, Power cables, Air regulator and pressure gauge, 20 feet cable, Work clamp and cable • Air compressor: at least 3 h, 1 phase/ or Delivery range 70 - 115 psi (pressure capacity), • with Maintenance / Operation Manual in English Language 		
4	Stationary Electrode Oven	<p>For Stick Electrode and MIG Wires</p> <ul style="list-style-type: none"> • Capacity: up to 300 lbs (136 kg) • Electrode length: up to 18 in. (450 mm) • Temperature range: 100 - 550 °F (38-288°C) adjustable (w/ thermostatic control and thermometer) • Input Voltage AC: 220 V/ 60 Hz • Heating Element: 1000 W • with Maintenance / Operation Manual in English Language 		
5	Ultrasonic Flaw Detector	<ul style="list-style-type: none"> • Portable Phased Array Instrument for NDT (Non-Destructive Testing) 16PA • Phased Array Probe, 4 MHz, 16 element, 0.5 mm pitch • Phased array Wedges, ranging 35-75 degrees shear capacities for 0012 & 013 probes/ • Phased array wedges transducers for different degrees (45°, 60°, 70°, etc.) • Keypad: English, International, Language: English 		

		<ul style="list-style-type: none"> • Battery type: Lithium-ion rechargeable standard, (Lithium-ion / alkaline) including • Battery charger: 220 VAC, 50 - 60 Hz • Operation manual • Standard Software's, CD, Removable SD Memory Card, SD adaptors to USB • Couplant-glycerin • Display Type: Full VGA multi-colored/transflective color LCD, 60 Hz update rate • With complete accessories to operate including its featured functions, • Angle beam transducers, pulser, adaptors, calibration block and others. • Transducer connections: BNC or Number 1 LEMO 		
6	Oxy-acetylene Welding/ Cutting Outfit	<p>Complete accessories:</p> <ul style="list-style-type: none"> • Oxygen and Acetylene Regulators • blow pipe torch handle • cutting and welding tips • cutting torch or equal pressure cutting attachment for acetylene and alternative fuels, twin hose • tip cleaner, spanner and flint lighter 		
7	Lathe Machine (Conventional)	<p>Lathe Machine, General Specifications:</p> <p>Horizontal Lathe</p> <ul style="list-style-type: none"> • Max swing over bed - 350 - 560 mm • Max swing over gap - 500 - 780 mm • Max swing over cross-slide - 150 - 380 mm • Distance between centers -500 - 1000 mm • Bed width - 150 - 350 mm • Cross slide travel - 150 - 300 mm <p>Main Spindle</p>		

	<ul style="list-style-type: none"> • Spindle bore - $\Phi 30$ - 80 mm • Spindle speeds - 0-5000 rpm 18 steps <p>Tailstock</p> <ul style="list-style-type: none"> • Tailstock spindle diameter - 40 - 75 mm • Tailstock spindle taper - MT 3 or MT 4 <p>Threading</p> <ul style="list-style-type: none"> • Metric pitch threads - 0.2 -14.0 mm / pitch" • Inch pitch threads - 2- 75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds - 0.04 -1 mm/ rev • Range of cross feeds - 0.02-1.25 mm/ rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply – 220 volts, 60hz • Phase – 1 or 3 phase • Main spindle motor - 3 - 7.5 hp • Coolant pump motor - .125 HP (1/8" hp) <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck with internal and external jaws • 1 pc - 4 Jaw chuck, • 1 pc - Face plate, • 1 pc - live center, • 1 pc - dead center, • 1 pc - Steady rest, • 1 pc - follower rest, • 1 set - lathe dog (straight and bend tail) , • 1 set tool holder (straight, left, right), • 1 pc - drill chuck with arbor, • quick change tool post, • with Operations manual (English) • 1 year warranty for spare parts and 2 years in support service 		
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8	Pencil Grinder	High speed die grinder Capacity: Collet- 6 mm to 8 mm 220 - 240 VAC No load speed: 7,000 - 28,000 rpm Continuous rating input: 400 - 750 W		
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Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

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Lot 9. Refrigeration and Air-Conditioning Servicing NC III

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Variable Refrigerant Frequency Air Conditioning Unit with Central Controller	8 HP capacity outdoor unit with 4 fan coil unit (FCU) 1 HP wall mounted 2 HP ceiling suspended cassette type (FCU) 220 volts 1 phase 60 hz		
2	Inverter Type Air Conditioning Unit (Cassette)	PACU cassette type A/C unit; 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3.0 tons		
3	Inverter Type Air Conditioning Unit (Ceiling Concealed)	Package type A/C unit, ceiling concealed ducted inverter split type, 5.0 kw, 220 volts, 60 hz, 2 hp capacity		
4	Inverter Type Air Conditioning Unit (Floor Mounted)	Split type A/C unit, floor mounted, 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3 TR		
5	Inverter Type Air Conditioning Unit (Wall Mounted)	Split type A/C unit, wall mounted, 220 volts, 60 hz, 1 phase, cooling capacity, 10 kw, 3 hp capacity		
6	Oxy-acetylene with Complete Accessories	With complete accessories, cuts up to 15 mm, welds up to 5 mm with torch handle, equal pressure cutting attachment for acetylene and alternative fuels, mixer, 3 welding tips, cutting tips, single stage cylinder regulator for oxygen, safety goggle, igniter and flints, 10 way tank wrench, 6 m twin hose, brass handle with large flow capacity for heavy duty applications		

7	Welding Helmet (Auto-Darkening)	Auto darkening lense, wide vision, variable shade from DIN 9-13		
8	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power 220 V, output current: 200 Ampere		
9	Leak Detector	Intended for 404A, 410A, digital type heated diode sensor with mechanical pump, sensitivity level 2, sensitivity per year 0.25 ounce/ year, CFC's, HCHF and HFC, sensor 2D alkaline batteries spare, filter and hard plastic carrying case, unit cases heated diode sensor technology automatically compensate for changing background, contamination		
10	Anemometer SE	Digital type, measuring the current wind speed with minimum and average values, temperature display and percieve temperature (wind chill), wind strength can be set as meter, m/s, km/h, mph, knots		
11	Refrigerant Recovery Machine (Hydrocarbons)	220-240 VAC, 60hz, with recovery tank of 50 lbs capacity, direct liquid of 3.03 lbs per minute, direct vapor of 0.03 lb per minute, push/pull of 12.22 lbs per minute		
12	Vacuum Pump	Two-stage, 220 VAC, 60 hz, single phase, 5.0 CFM capacity		

13	Portable High Pressure Washer	220 volts, 60 hz, 1 hp capacity, single phase		
14	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase		
15	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 10. Warehousing Services

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Forklift Truck (Counter Balance)	Not less than 3000 mm max. lifting height capacity Lifting weight/ rated capacity- minimum 1 ton Battery Charger		
2	Forklift (Reach Truck)	Not less than 3000 mm max. lifting height capacity Lifting weight/ rated capacity- minimum 1 ton Battery Charger		
3	Trans-Stacker/ Transporter	Vertical Lift Hydraulic Dimension not lesser than 57" x 27" x 62" Not less than 1000 lbs capacity		
4	JIB Crane	1 ton capacity mobile 220 VAC, 3 phase		
5	Hand Hoist (Chain Block)	2 tons capacity heavy duty		
6	Shelving Unit	Not less than 36" x 30" x 85", 2 Layer Steel Heavy duty		

7	Trolley, Platform Type with Handle	Steel Handle Not less than 710 x 455 mm Up to 150 kg capacity With heavy duty wheels		
8	Pallet Truck	Hand Driven Steel Handle Hydraulic Not less than 2 tons capacity		
9	Drum Truck Trolley/ Lifter	Self-Standing with Kick Stand 180 kg capacity Adjustable drum truck allows for transporting Tipping Not less than 1520 mm x 600 mm x 1500 mm		
10	Step Ladder, Double Sided	Not less than 8 feet Double sided		

Name of Bidder: _____

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Lot 11. Mechatronics NC IV

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Automatic Production Line Trainer	<p>FEATURES: Automatic Production Line Trainer (APL) contains comprehensive training programs for each unit station, automatic production line, pneumatic system, frequency inverter, PLC high-speed pulse and counter, servo motor, analog, network technology, human-machine interface, and configuration technology</p> <p>5 lines composed of: *Conveying unit/ Processing unit/ Feed unit/ Sorting unit/ Assembly unit Power supply: 3 phase, 5 line AC, 380 V, $\pm 10\%$, 60 Hz Rack: Aluminum and Steel Includes Service Manual and warranty Workbooks and Software</p>		
2	MPS (Modular Product System)	<p>Input Power: AC 220 V, 60 Hz Output Power: DC 24 V, 3A Interface: 1) Digital Input/ Output (default); 2) Fieldbus: Profibus Includes Sub-systems</p> <ol style="list-style-type: none"> 1. Distribution - separating parts from stack and feeding into a process 2. Sorting - Sorts parts by color and moves them via an electrical conveyor belt 3. Processing - Electrical rotary table models common industrial processes 4. Separator - The separating station permits 		

		<p>the creation of flexible assembly lines</p> <p>5. Handling - Modern pick and place application that moves part from pick-up point to one of several drop-off locations</p> <p>Includes Service Manual and warranty, and Workbooks and Software</p>		
3	Human Machine Interface Package	<p>HMI Designer studio software - CD</p> <p>24 voltage supply can be looped through with key panel</p> <p>Number of keys- 8, LED colors- red, yellow, green, blue, white</p> <p>Digital input -8 (2 additional fail safe inputs with KP8F)</p> <p>Digital output- 8</p> <p>Includes Service Manual and warranty, and Workbooks and Software</p>		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 12. Food and Beverages Services NC III				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Espresso Machine	Dual- boiler technology and saturated brewing groups, Steam Boiler Capacity: 7 Liters, Coffee Boiler Capacity: 3.4 Liters, Semi-Automatic, Stainless steel boilers and brewing groups, Omni-directional stainless steel steam wands, Solid stainless steel housing and base, Sight glass for water level monitoring of steam boiler, 220 V, 60 Hz		
2	Coffee Grinder	Wide grinding range, from espresso fine to a coarse drip, Revolutionary pass- through grind mechanism with 28 - 270 grind settings: 25 - 30 stepped macro settings plus a step less micro adjustment range, Convertible grinding forks- grind hands- free directly into a porta filter, or convert to grind into the included bin or your favorite dripper, Time- based grinding with three customizable presets, Power: 220 V, 60 Hz, 290 watts		
3	Coffee Maker	Dimensions (W x D x H cm): 22 x 26 x 28 cm Removable water reservoir: 1.4 L Pump pressure: 20 Bar Filter holder for ground coffee, pods and capsule Rapid Espresso Cappuccino System: Cup warmer Removable drip tray, 220 V, 60 Hz		
4	Juicer	1500 watts locked power juicer, 5.34 kg, juice jug capacity: 1.5 liters, pulp collector capacity: 3 liters, 220 V, 60 Hz		

5	Dinner Plates	10 inches diameter plate, ceramic/ porcelain, white in color, and round in shape		
6	Appetizer Plate	6 inches diameter; ceramic/ porcelain, white in color and round in shape		
7	Show/ Service Plates	13 inches diameter, ceramic/ porcelain, white in color and round in shape		
8	Salad Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape		
9	Fish Plates	9 inches diameter, ceramic/ porcelain type, white in color and round in shape		
10	Dessert Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape		
11	Side Plates or Bread Plates	6 inches diameter, ceramic/ porcelain, white in color, and round in shape		
12	Soup Plate/ Bowl	3 inches deep, ceramic/ porcelain, white in color and round in shape		
13	Bouillon Cups & Saucers	Ceramic/ porcelain, Cup and Saucer - 5 inches diameter, white in color		
14	Teacups and Saucers	Ceramic/ porcelain; Set of cup and saucer cup - 10 oz capacity; Saucer - 4 cm diameter; white in color		
15	Tea Pots	Stainless steel micromesh filter; 42-ounce tea pot and infuser		

16	Demitasse Set	Set of cup and saucer with teaspoon; ceramic/porcelain, 3-1/3 oz cup capacity, 4 inches long tsp, white in color		
17	Dinner Spoon	Measures 8" L 18/8 stainless steel construction Dishwasher safe		
18	Dinner Forks	Measures 8" L 18/8 stainless steel construction Dishwasher safe		
19	Dinner Knives	Measures 9-1/2" L 18/8 stainless steel construction Dishwasher safe		
20	Salad Forks	Stainless steel Length: 22.5 cm Thickness: 8 mm		
21	Salad Spoon	Measures: 6-3/4" L 18/8 stainless steel construction Dishwasher safe		
22	Salad Knives	Stainless steel Stain resistant, dishwasher safe, 5 - 7" long		
23	Fish Knives	Stainless steel fish knives Length: 22.5 cm Thickness: 8 mm Weight: 86 g		

24	Fish Forks	Stainless steel fish fork Length: 21.5 cm Thickness: 8 mm Weight: 86 g		
25	Dessert Spoons	Stainless steel; stain resistant, durable, 4" long		
26	Dessert Forks	Stainless steel; stain resistant, durable, 6" long		
27	Cocktail Forks	Stainless steel, stain resistant, durable, 4" long		
28	Teaspoon	Measures: 6 - 3/4" L 18/8 stainless steel construction Dishwasher safe		
29	Steak Knives	Stainless steel, stain resistant, durable, 6" long		
30	Service Forks	Stainless steel, stain resistant, durable, 7" long		
31	Service Spoons	Stainless steel, stain resistant, durable, 7" long		
32	Steak Forks	Stainless steel, stain resistant, durable, 6" long		
33	Oyster Forks	Stainless steel, stain resistant, measure 5 3/8" long		
34	Butter Knives	Stainless steel, stain resistant, durable, 16 cm		
35	Red Wine Glasses	Stemmed glass; 12 3/8 oz. capacity, crystal glass		
36	White Wine Glasses	Stemmed glass, 9 7/8 oz capacity, crystal glass		
37	Water Goblets	Stemmed glass, 14 3/4 oz capacity, crystal glass		
38	Champagne Flute	Stemmed glass, 190 ml capacity, crystal glass		

39	Pilsner Glasses/ Ice Tea Glasses	Crystal glass; Dimension: 8" H x 3" W x 3" D; Capacity: 16 oz		
40	Wine Decanter	Capacity: 200 ml, Material: High quality Glass, Unique and elegant shape, easy to pour		
41	Waiter's Friend	Stainless steel, all-in-one corkscrew, bottle opener and foil cutter		
42	Salt and Pepper Shakers	Stainless Steel Salt and Pepper Grinder		
43	Rectangular Trays	Non-slip plastic tray; heavy duty construction for commercial use; rubber liner prevents slipping; stain and odor resistant		
44	Round (Bar) Trays	Non-slip plastic tray; Heavy duty construction for commercial use; Rubber liner prevents slipping; stain and odor resistant		
45	Soup Tureen	Microwave and dishwasher safe; white porcelain; covered soup tureen with ladle		
46	Peppermill	Stainless steel/ wood; 5.5 inch long		
47	Sauce Ladles	Stainless steel with end hook for hanging; heavy duty; Size: 20 cm x 4 cm		
48	Cake Servers	Stainless steel; stain resistant, durable, 5 1/2" long		
49	Ice Buckets with Tongs	Stainless Steel, 3 liters/ 0.8 gallon		
50	Boning Knives	Stainless Steel; 5 inch long; with black handle		

51	All-Purpose Knives	Stainless Steel; 8 inch chef knife; thickness: 3.0 mm; knife length: 13.5 inch; blade length: 8 inch		
52	Chopping Boards	Rubberized/ polyethylene, medium size, white in color		
53	Non-Stick Round (Crepe) Pan	Aluminum fry pan; non-stick coating fry pan; diameter: 16*4.0 cm - 20*4.0 cm, 26*4.8 cm; shape: round		
54	Turners (For Non-Stick Pans)	Silicone slot turner of kitchen; size: 342*82*48 mm		
55	Reach-in Chiller	Heavy duty; two door reach-in, stainless steel body; 500 liters capacity; 220 V/ 60 Hz; single phase		
56	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase		

57	Water Dispenser (Hot & Cold Dispenser)	Cooling Capacity: 2 L/h Heating Capacity: 5 L/h Cold Water Temperature: 5 - 10°C Hot Water Temperature: 85 - 95°C Cooling Power: 90 W Heating Power: 550 W Compressor brand: Asbeila S30G Water Faucet Connection: Fixed Tank Material: Hot & Cold Tank Material Hot & Cold Tank Structure: Welding or belt Left & Right Side Panel Thickness: 0.5 mm Inner Silicon tube Level: Food Grade 220 V 60 Hz		
58	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000		
59	Washing Machine	Top loaded, 10 kgs, 220 volts, 60 Hz, single phase, spin dry		
60	Mop Bucket with Wringer	Plastic, 32 liters capacity		
61	Ice Crusher	220 V/ 300 watts/ 60 Hz, scrapping block ice into flake ice, micro switch, container volume: 1000 ml, 304 stainless steel blade		
62	Stand Mixer	3.5 liter capacity mixer, 220 V/ 700 watts, 4 speed electronic pulse, stainless steel basket		

63	Hand Mixer	140 watts mixer, 6 speed operation, free standing base, 220 V, 60 Hz		
64	Food Processor	Heavy duty, 5 liters, stainless steel bowl, 220 V/ 60 Hz, 1 hp		
65	Steam Iron	Ceramic sole plate, output: 35 g/min, steam boost: 100 g, 2100 watts, water tank capacity: 270 ml, 220 V, 60 Hz		
66	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase		
67	Dishwashing Machine	Hood type 220 VAC/ 1 phase 800 - 1600 plates capacity per hour includes tray/ racks		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 13. Commercial Cooking NC III

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase		
2	Reach-in Chiller	Heavy duty; two door reach-in, stainless steel body; 500 liters capacity; 220 V/ 60 Hz; single phase		
3	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000		
4	Stock Pot	Heavy duty; Four burner stove; cast iron top plate; stainless steel material; countertop		
5	Deep Fat Fryer	Heavy duty; electrical twin tank fryer; stainless steel material; countertop; capacity 10 liters; 220 V/ 60 Hz; single phase; power: 2 Kw - 17 Kw		
6	Commercial Microwave Oven	Heavy duty; stainless steel body; capacity: 17 liters; 220 V/ 20 Hz; single phase; power: 1 kW-3 kW		
7	Dishwashing Machine	Hood type 220 VAC/ 1 phase 800 - 1600 plates capacity per hour includes tray/ racks		

8	Blender Machine	Heavy duty; stainless steel blade; capacity: 2 liters; heavy duty; 220 V/ 60 Hz/ 1 phase; power: 1.1 kW - 2.7 kW		
9	Pressure Cooker	Heavy duty; stainless steel; capacity: 9 liters		
10	Meat Slicer	Aluminum and stainless steel body material; stainless steel blade; adjustable thickness slice; 220 V/ 60 Hz; single phase		
11	Meat Grinder	Aluminum and stainless steel body material; stainless steel blade; capacity: 5 - 10 lbs per minute; 220 V/ 60 Hz; single phase; power: 0.735 kW - 1.3 kW		
12	Salamander Griller	Twin basket; countertop; stainless steel and chrome material; voltage/ frequency: 220 V/ 60 Hz; single phase		
13	Exhaust Hood	60 cm width; heavy duty; stainless steel; wall mounted		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

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Date: _____

Lot 14. Information and Communication Technology				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License		
2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network Environment Photo Quality WiFi Connectivity		
3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application		

4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible		
5	Tablet	128 GB Storage WiFi With installed MS Office Application		
6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible		
7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless		
8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC;		

		<p>Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio;</p> <p>Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style</p>		
9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal</p> <p>Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p>		

		<p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh LiPo 2S Video Output Port: GL300E HDMI, GL300F USB Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: LiPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M</p> <p>Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100- 3200 (Auto), 100- 6400 (Manual); Photo 100- 3200 (Auto), 100- 12800 (Manual)</p>		
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		<p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed: 8 - 1/ 8000 s PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>		
10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digi Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in wi-fi with NFC</p>		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 15. Science Lab (Chemistry and Physics)

TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity		
2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity		
3	Test Tubes	Glass material Large 15 ml capacity		
4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving		
5	Laboratory Tong	Stainless steel 8 3/4" long		
6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses		

7	Beaker	Durable glass material 250 m Borosilicate		
8	Erlenmeyer Flask	Durable glass material 250 mi Borosilicate		
9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends		
10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)		
11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)		
12	Watch Glass	100 mm Selected quality glass, polished ground edges		
13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity		

14	Spring Balance	<p>Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment.</p> <p>Calibrated in newtons</p>		
15	Vernier Caliper	<p>Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value</p> <p>Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight</p>		
16	Ammeters	<p>Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories</p>		

17	Biological Microscope	<p>Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x</p> <p>Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror provides illumination to make details of specimen slides easier to see</p> <p>Basic condenser concentrates light onto the specimen</p> <p>Adjustable arm (0° to 60°) for comfortable viewing</p>		
18	Thermometer	<p>Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion</p> <p>Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C</p> <p>With permanently fused markings, packed in protective sleeving</p>		
19	PH Papers (Per Box)	<p>High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box</p>		
20	Safety Gloves	<p>Lightly powdered latex gloves 50 pairs per pack, size 8 - 8.5 inch</p>		

21	Test Tube Brush	300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop Bristles approximately 25 mm (1 inch) diameter		
22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity		
23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

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Lot 16. Surveying Equipment				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Total Station Surveying Equipment	<p>3.5" Large Dual Touch-screen HD Display Android Smartphone as data collector EDM Trigger, automatically measurement key 500 Meters long range reflector less 200,000.00 points memory data upload/download Complete surveying/ construction/ road programs on board</p> <p>Electronic Bubble; direct data plotting on main screen</p> <p>Alphanumeric Keys for easy and quick data input MS Windows Compatible; GPS data ready Data Text, DXF, CSV/ AutoCAD ready</p> <p>Telescope - Length: 125 - 152 mm - Magnification: 30x - Image: Erect - Field of View: 1°20' - 1°30' - Resolve Power: 3" - Min. Focus Distance: 1.3 - 1.7 m</p> <p>Measurement Range: 1.5 to 5,000 meters</p>		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Lot 17. Air Conditioning Unit				
TESDA'S SPECIFICATIONS			BIDDER'S SPECIFICATIONS	
No.	Item	Specifications	Item/Brand/Model	Specifications
1	Air Conditioning Unit	Inverter type air conditioning unit Split type AC unit, floor mounted, 4 hp, 220 volts/ 60 Hz/ 3 phase, cooling capacity: 10 kw		

Name of Bidder: _____

Name and Signature of Authorized Representative: _____

Position/Designation: _____

Date: _____

Handwritten signature/initials

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
1	Agricultural Crops Production NC III						
	1	Farm Tractor	4 wheel drive with the following specifications: Engine: direct injection, vertical, water- cooled 4 cycle diesel No. of cylinder: 3 – 4 Engine gross power: 35 - 50 hp Rated revolution: 2200 - 2700 rpm Hydraulic system: position control with attachment of any of the following: disc plow, disc harrow, rotary tiller, & trailer	1	unit	1	
	2	Rice Combine Harvester	Engine: 50-70 hp water-cooled diesel engine Travelling speed: 0-0.97 m/sec (low), 0-1.91 m/sec (high) Cutting width: 2,000 - 3,000 mm Threshing system: axial-flow type Harvesting capacity: 0.1 - 0.8 ha/hr	1	unit	1	
	3	Corn Sheller	Capacity: 1-5 tons per hour (@50 kg/cavan) Shelling Recovery: 95 - 99%	4	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			Power Requirement : 7 - 14 hp diesel engine				
	4	Double Pass Rice Mill	300 - 1500 kg/hr (10 - 30 cavan/ hr)	1	unit	1	
	5	Grain Moisture Meter	Measuring Range: Corn, 8-36% MC Measuring Range: Palay, 9-40% MC Accuracy: $\pm 0.2 - 0.5$ % MC (10-20%) Power source: AC/DC (battery-operated)	4	unit	1	
	6	Hand Tractor	Power requirement: 6 - 10 hp Overall length: 1500 - 2700 mm Overall width: 750 - 1200 mm Overall height: 800 - 1150 mm With attachments of any of the following: disc plow, harrow, and cage wheel	4	unit	1	
	7	Mechanical Rice Transplanter	Engine: Air-cooled, 4-stroke Power requirement: 1.5 - 4.5 kW Planting row: 4 rows Row distance: 30 cm Planting capacity: 1 - 1.5 ha/day	4	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	8	PH Meter	Range: 0 - 14 pH Moisture: 0 - 10% (0-100%) Resolution: 0.01 - 0.2 pH Type: Portable/ pen-type	4	unit	1	
	9	Single Cylinder Diesel Engine	Water-cooled, horizontal, single-cylinder, 4-stroke diesel engine horsepower: 7 - 14 hp	4	unit	1	
	10	Thresher	Construction: all steel Power requirement: 10 - 14 hp	4	unit	1	
	11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100	4	unit	1	
Sub-total, Agricultural Crops Production NC III							8,820,414.096
2	Agricultural Mechanization						
	1	Mechanical Dryer Recirculating Type	Capacity (Kg): 6.000 to 10,000 Loading Rate: 25 - 75 min Unloading Rate: 15 - 75 min Drying Rate: At least 0.5% - 3% per hour	1	unit	1	
	2	Walker Behind Vibrator Roller Compactor	Double drum Operating Weight 550 - 800 kgs Engine: Diesel or Gasoline Engine at 6.0 to 18 hp	1	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			Travel Speed: 2 km/hr - 7.5 km/hr. Centrifugal Force: 15 KN to 25 KN.				
	3	Rice Combine Harvester	At least 70 Horse Power Diesel Engine; Speed harvesting at 1.85 meters/second 2.00 to 3.00 meters cutting width	1	unit	1	
	4	Agricultural/ Farm Tractor Four Wheel Drive (90 -120 Hp) with Three (3) Point Hitch Linkage	Engine Power: 90 -120 hp with Rated Engine Speed of at least 2100 Rev/Min Number of Engine Cylinder: 4 - 6	1	unit	1	
	5	Rotavator/ Rotary Tiller - Four (4) Wheel Tractor Mounted	Mounted within 50 - 100 hp Agricultural/ Farm Tractor Working Width of 2000 mm and at least 44 blades working at 2100 rpm engine speed	1	unit	1	
	6	Four Bottoms Disc Plough, Four (4) Wheel Drive Tractor Mounted	Mounted to the Agricultural Tractor Power with 60 to 120 hp Tractor Working Width 1000 - 1600 mm Number of Disk: 4 Disk Diameter: 500 - 700 mm	1	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	7	Engine Operated Chainsaw	Engine: Gasoline type Power Output: at least 5 hp (3.7 kw/ 4.8 bhp) Bar Length at least 20 inches	1	unit	1	
Sub-total, Agricultural Mechanization							11,620,864.992
3	Aquaculture						
	1	Dissolve Oxygen Meter	Display Type: LCD DO Measurement: 0 - 45 mg/L Temperature Compensation: -5 to 50°C	4	unit	4	
	2	Salinity Refractometer	Type: Analog Specific Gravity (SG): 1.000 - 1.070 Measurement Range: 0 to 100 %	5	unit	4	
	3	Soil PH Meter	Meter Type: Portable pH Range: 0 - 14 pH pH Resolution: - ± 0.2 pH Humidity Range: 0 to 8%	5	unit	4	
	4	Water Thermometer	Meter Type: Digital Display Type: LCD Measuring Range: -200 to 1,370°C Resolution: 0.1°C, 1°C	4	unit	4	
	5	Digital Water PH Meter	Meter Type: Digital Display Type: LCD Measurement Range: -2 to 16 pH Resolution: 0.01 Accuracy: ± 0.1	4	unit	4	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			Temperature Compensation: -10 to 120°C				
	6	Secchi Disk	Type: Portable Size: 20 cm diameter with black and white sections - with calibrated line marked every half meter up to 20 meter	5	unit	4	
	7	Water Quality Test Kit	Test Range Ammonia Nitrogen: 0 - 3 ppm (mg/L) Nitrite Nitrogen: 0 - 0.8 ppm (mg/L) pH: 4 – 10 Alkalinity: 0 - 4000 ppm (mg/L) Carbon Dioxide: 0 - 100 ppm (mg/L) Chloride: 0 - 400 ppm (mg/L) Dissolved Oxygen: 0 - 20 ppm (mg/L) Total Hardness: 0 - 4000 ppm (mg/L) Temperature: -5 - 50°C	4	unit	4	
	8	Multi-parameter Meter System	Meter Type: Portable/ Electrode Display Type: LCD Water Proof USB Connectivity pH Range: 0 – 14	2	unit	4	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			Salinity Range: 0 – 70 Dissolved Oxygen Range: 0 to 50 ppm Temperature Range: -5 to 105°C				
	9	Eckman Dredge	Material: Stainless Steel Sampling Area: 6" x 6" Inclusive of the following accessories: Messenger Steel Aircraft Cable (100 meters)	4	unit	4	
	10	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables input power: 220 V output current: 200 Ampere	4	unit	4	
	11	Water Pump	Engine with water pump Engine: 7 - 10 hp Water pump - NS 100	2	unit	4	
	12	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit	4	
	13	Grass Cutter	Engine Type: 4 Stroke Fuel: Gasoline Displacement: 35.8 cc Fuel Tank: 630 ml - 700 ml	4	unit	4	
Sub-total, Aquaculture							13,735,532.276
4	Automotive Servicing						
	1	Parts Washer	Drum: Inside dimensions - 7" H X 28" W X 22" D Fluid Requirements:	2	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			10 gallons Input: 120 V/ 220VAC (60 Hz) Pump Volume: 210 GPH Output Pressure: 50 PSI Dimensions: 35" X 31" X 23" Open Height: 60"				
	2	Tire Changer	Inside clamping: 13 - 26" Outside clamping: 11 - 24" Voltage: 220 V Motor Power: 0.75 kw/ 1.1 kw HP: 1 Operating Pressure: 90 psi	2	unit	2	
	3	Roller Cab/ Trolley Tool Set	5 Drawers Roller Cab with the following tool set: 1 set Screwdriver L-shape Wrench 1 set Double-open-end wrench 1 set 45 deg. Double wrench set 1 set Ratcheting combination wrench set 1 set Adjustable wrench set	2	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			1 set Standard pliers set 1 set Circlip plier set 1 set Impact socket set 1 set 3/8" Square drive socket set 1 set 1/4" Square drive socket set 1 set 1/2" Square drive socket set				
	4	Lifter Wheel Aligner	Design: Scissor Lifting Capacity: 3500 - 5000 kg Lifting Height: 1700mm Motor: 220V/ 50 Hz	1	unit	2	
	5	Electronic Battery Tester	Battery Nominal Voltage: 12 V CCA : 125 A to 1400 A SAE/EN: 200 A to 900 A DIN/ IEC: 120 to 550 3-4 digit LED display	2	unit	2	
	6	Car Wheel Balancer	Power supply: 220 V/ 380 V Measuring time: 8-20 sec. Max. rim diameter: 10" - 24" Balancing speed: 42 - 220 rpm Max. rim width: 1.5" - 20" Max. wheel weight: 65 kg Balancing accuracy: ± 5g	1	unit	2	
	7	Global Diagnostic System (GDS) Professional Scanner	CPU: Dual Core 1 GHz Battery: 3000mh, rechargeable	2	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Extension Memory Card: 32 G</p> <p>Memory: 512 MB LCD: 7.0 inch</p> <p>LCD Resolution: 1024 x 600</p> <p>Screen: capacitive touch screen</p> <p>Cameras: 2 mega rear and 0.3 mega front</p>				
	8	Front Wheel Alignment Trainer	<p>Included item:</p> <p>Original vehicle steering wheel</p> <p>Camber caster steering axis inclination</p> <p>A set of two wheels- turntable with gauges allows for measurement of the degree of turn on both sides of zero (for calculation of toe-in & toe-out)</p> <p>Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out.</p> <p>Technical Description: 1. The trainer consists of an original front end unit from a typical passenger vehicle. 2. It has been modified for quick adjustment of all</p>	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>alignment and steering geometry points.</p> <p>3. The unit is mounted on a special stand which facilitates alignment procedures and utilization of test equipment and accessories. The trainer comes with two wheel rims with tires.</p> <p>Additional recommended accessories or options:</p> <p>Original vehicle steering wheel</p> <p>Camber/ caster steering axis inclination gauge</p> <p>A set of two wheel turntables with gauges allows for measuring of the degree of turn on both sides of zero for calculation of toe-in and toe-out.</p> <p>Ball joint inspection gauge for checking upper and lower ball joint condition, out of round tires and wheel run out.</p> <p>The following topics are covered in the instruction program:</p> <p>General theory on suspension and steering system including different types and geometry principles.</p> <p>Pre-alignment check</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>procedures: tire pressure and wear, front wheel bearing play and adjustment, ball joint play inspection, shock absorber wear, steering gear looseness.</p> <p>Caster: determination, adjustment and correction</p> <p>Camber: determination, adjustment and correction (positive and negative)</p>				
	9	Anti-Lock Braking System with Traction Control System (TCS)	<p>The major components included are:</p> <p>Four rotating wheels with wheel sensors, with digital speed display for each wheel (4 digital displays);</p> <p>4 variable speed electrical drive systems for each wheel to control the individual speed of each wheel, master brake cylinder with pedal handle;</p> <p>ABS hydraulic actuator (modulator) unit which is controlled by the on-board computer system (ECU);</p> <p>Five brake line pressure gauges to show the pressure differentials from the master brake cylinder to the individual wheels;</p> <p>Brake Master Cylinder with Vacuum assists boosts mechanism and brake pedal assembly;</p>	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>The front of the trainer features precise schematic color graphic illustrations that clearly explain the operation of the entire ABS and braking system;</p> <p>A control panel is provided with an on/ off power switch, power system light (POWER ON), ABS warning light (indicated problems) and an ABS operational light (ABS ON). Also has Volt and Ampere meters to measure the DC input power and a brake light to show the operation of the braking system just as on the vehicle;</p> <p>Special Road Conditions and Performance Display Panel;</p> <p>Optional Electronic Fault insertion panel and Electrical Test Point;</p> <p>The trainer comes complete with a training course on ABS operation and servicing including student job sheets and a technical manual on ABS systems;</p> <p>A series of options to enhance the trainer such as fault insertion systems, power supplies and additional instructional materials, vacuum pump</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			for power brake boost; Power Source: Note that 30A, 12 Volt DC power source is required from the shop to operate the trainer. If none is available an optional 12 VDC power supply can be ordered to provide this correct power				
	10	Half-Cut AUV Engine Management System	<p>Electrical control gasoline engine assembly, auto fault</p> <p>Automatic transmission assembly</p> <p>Electrical and electronic devices such as: ECM, TCM, AFS, CKP, CMP, O2 sensor, WTS, control relay and etc.</p> <p>Injector, filter, fuel tank, fuel pump, fuel equipment, DC 12 V/ 60 A, battery 12 volts</p> <p>Ignition coil built -in, spark plug, high voltage resistant cables</p> <p>Cooling system: radiator, overflow tank Exhaust system: Catalytic converter, Emission, Silencer</p> <p>Ignition switch with key Anti-vibration dampers and a urethane wheels Control box, fuel tank, accelerator lever Automatic transmission oil</p>	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			pressure gauge for each singular (1.5MPA*83,2.5 MPA*4) Vacuum pressure gauge (1 MPA) Fuel pressure gauge Battery voltage gauge (30 V) Note Includes : training manual/ module				
	11	Airbag System Trainer	The trainer consist of the following components: Sectioned steering wheel with deployable and reusable airbag Pressure regulator with air filter, solenoid valve and compressed air connection Airbag system circuit diagram with connection and test points Set of two mm test connection leads Inflator unit Rear cable unit SRS control unit Airbag simulator with graphic and LED display Crash switch simulation system	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Dash sensor unit Fuse Power indicator light Ignition switch</p> <p>Technical Parameters: The steering unit with a typical restraint unit.</p> <p>Additional components and controls are mounted on the board to complete the system such as the impact crash sensor and controls. The airbag operation is demonstrated and realistic faults are also introduced to show typical problems in the units.</p> <p>A typical electronic circuit for the SRS system is incorporated into the trainer. This can be used also for realistic fault simulation to show typical problem in the units. After the circuit is connected, the airbag operation is both simulated via LED graphic display that shows the detonation and deployment of the air bag system in a simulated crash situation. And also the airbag deploys, synchronized with the LED graphic display unit, through the use of compressed air and a pressure regulator. The trainer comes with a comprehensive manual covering the operation of the trainer.</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	12	Gas Tester	<p>The pump consists of a diaphragm with one way valve and thus the pump will only be heard to click when connected to the exhaust</p> <p>CO Function Specification:</p> <ul style="list-style-type: none"> - Calibrated range: 0-10% CO (indicates un-calibrated to 20% C) - Accuracy: +/-0.5% CO typical (throughout the indicated range 0.5% CO to 6.5% CO) <p>Kit Contents:</p> <ul style="list-style-type: none"> - Gas tester instrument including collector box and pulse pump/ water trap assembly - Metal exhaust probe with retaining springs - Flexible plastic pipes (3 lengths) - Instruction handbooks 	2	unit	2	
	13	Recovery Machine	<p>Compact and Lightweight 40% smaller footprint, easy to carry, weighing in at 18 lbs</p> <p>Oil-less compressor Capable of recovering both liquid and vapour</p> <p>Handles almost all refrigerants</p> <p>Works with all common CFC, HFC, HCFC Refrigerants including R-410A</p>	2	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>High efficiency cross flow design</p> <p>Lay-out of fan and condenser is maximized for shorter cycle times</p> <p>High pressure safety shut-off switch</p> <p>Automatically shuts off machine if pressure rises above PSI</p> <p>Easy to operate Rugged case</p> <p>Easy to read gauges, comfortable handle and simple 2 valve controls</p> <p>IEC connector and power cord</p>				
	14	Brake Fluid Exchanger	Remove and replace fluid from most types and models of vehicles' brake system. Also removes trapped air	2	unit	2	
Sub-total, Automotive Servicing							17,232,526.124
5	Electrical Installation and Maintenance NC III						
	1	Electrical Motor Control Learning System	This system teaches operation, installation, applications and troubleshooting of electric relay type motor control systems. The system contains the following items: Workstation Console, set of Control Stations, Hand-held Multimeter, Lead Set, Electric Motor, Motor Mounting Frame, Student Curriculum, and	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Instructor's guide.</p> <p>The following stations is supplied:</p> <p>Safety Switch Power Station (1 pc fused 3-phase safety switch, 2 pcs. Padlocks, 2 pcs. Safety tags, 4 pcs. Banana jacks, 1 pc Pre-attached power cord 4 poles, 5 wires, 1 pc. Lockout/Tag out mechanism, 1 pc. Fault Module with 2 faults, 1 pc. Mounting unit for right angle orientation to trainer), Operator Station (1 pc. Green flush push button (1 N.O., 1 N.C.), 1 pc. Black flush push button (1 N.O., 1 N.C.), 1 pc. Red mushroom push button (1 N.O., 1 N.C.), 1 pc. Three position selector switch (2 N.O.), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc 5-way binding post (ground), 1 Fault Module with 5 faults), Indicator Lamp Station (1 pc. Green indicator lamp, 1 pc. Push to test red indicator lamp, 1 pc. Yellow indicator lamp, 1 pc. 24 inch/ 61 cm green stackable banana lead, 7 pcs. 5-way binding posts (ground), 1 pc. Fault Module with five (5) faults), Control Transformer Station (1 pc. 250VA control transformer with protective cover, 1 pc. Dual fuse block with</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			protective cover, 4 pcs. 1.25 AMP class CC fuses (2 installed, 2 loose), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with three (3) faults), Reversing Contactor Station (2 pcs. 4 pole contactors, 1 pc Mechanical/ electrical interlock, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post ground, 1 pc. Fault Module with 5 faults), Overload Relay Station (1 pc. A-B overload relay, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 3 faults), Manual Motor Starter Station (1 pc. manual starter, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post [ground]), Multifunction Timer Station (1 pc. Multi-function timer with: on delay, off delay timing, interval, single shot timing, repeat cycle timing, pulse timing, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground),				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			1 pc. Fault Module with 4 faults), Drum Switch Station (1 pc. three phase reversing drum switch, 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), Limit Switch Station (2 pcs. Industrial grade limit switch (SPDT), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 3 faults), Control Relay Station (2 pcs. Four pole relays (2 N.O. / 2 N.C.), 1 pc. 24 inch/ 61 cm green stackable banana lead, 1 pc. 5-way binding post (ground), 1 pc. Fault Module with 5 faults), Pressure/ Float Switch Station (1 pc. Pressure switch (SPDT), 1 pc. Float switch (N.O. or N.C.), 1 pc. 24 inch/ 61cm green stackable banana lead, 1 pc. 5-way binding post (ground), Motor Connection Station (1 pc. Multi-pin industrial motor connector, 5 pcs. Red banana jacks, 5 pcs. Yellow banana jacks, 1 pc. Fault Module with 3 faults),				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Hand-Held Digital Multi-Meter, Stackable Banana Lead Set - 50 Leads, 3 Phase Induction Motor A 1/3 HP, NEMA 56 Frame machine rated at 208-230/460 Volts, 3 phase, Windings accessible through a multi-pin connector. To include: 1 pc. Motor mounting plate, 1 pc. Single end shaft for safety, 1 pc. Motor winding identification escutcheon, 1 pc. Fault Module with (2) winding faults.</p> <p>Motor Mounting Frame Is heavy duty steel frame construction, with pre-drilled holes for mounting of two motors, prony brake, electric brake, and flywheel. Minimum dimension is 27" W x 12" L x 4" H. The mounting surface is made of .125 in steel plate min, painted and silk-screened.</p> <p>Prony Brake A shaft torque measurement and load device. It consist of a formed steel gauge unit, aluminum brake drum with mounting for 5/8 inch motor shafts, balanced pulley, spring force gauge, load adjustment knob, double set screw locking device, coolant spray</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>bottle. Load range is 0 - 3.05 N-m</p> <p>HAND TOOL PACKAGE: FAULT TROUBLESHOOTING SYSTEM (This system consist of a computer-based fault controller, (2) ribbon cables, (1) computer managed software, (1) installation/operation manual. This system is designed and programmed so that students can connect the system to a wide variety of industrial controls training systems to provide a means by which faults can be automatically inserted into a training system to provide student practice in troubleshooting the system.</p> <p>The characteristics of the system should be as follows: Fault Controller (Includes enclosure with 35 fault relays, 10A 115/230 VAC rating, 35 cables, ribbon cable for connection to a host computer, computer-based controller, internal power supply, 120/230 VAC 50/60 Hz.), Student Curriculum</p> <p>(The student curriculum consist of (1) set of 10 Learning Activity Packets 73 skills in electric motor</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			control. The topics covered includes: motor starters, reversing starters, overload relays, motor start/ stop control, control transformers, magnetic motor starters, two wire control, three wire control, sequence control, jogging, on and off delay timing, sensor switches, and motor timer control. Students will learn installation, operation, schematic reading, circuit design, and troubleshooting), Teacher's Assessment/ Portfolio Guides (A teacher's guide is provided. It contains student data sheets, data sheet solutions, self-review answers, quizzes, quiz answers, student skill record sheets, and authentic assessment. A quiz is provided for each packet. A question is provided in each quiz for each cognitive objective taught. All tasks listed in the packet is listed on personalized student record sheets. The Instructor's Package includes directions for authentic skill assessment.)				
	2	Variable Frequency AC Drive Learning System	Variable Frequency AC Drive Station Shall include the following:	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>1 pc. Variable Frequency AC Drive with (Built in control keypad, Ability to program 30 different operating parameters</p> <p>Capability of displaying 10 different operating conditions</p> <p>Shall be capable of operating 3-phase motors from a single-phase supply</p> <p>Ability to accept commands from four (4) different sources: Keypad, External pot, 4-20mA Signal, $\pm 10-90$ VDC signal, Built in fault diagnostics, DC injection braking capability, PWM type output with adjustable carrier frequency (2 to 8 kHz)</p> <p>Provisions for addition of an external Dynamic Braking resistor, 1 pc. Two position fuse block with fuses, 3 pcs DPST push button switches, 3 pcs. SPDT toggle switches 1 pc. 3 PST keylock safety switch, 1 pc. Potentiometer with 10 turn indicating dial, 1 pc. Fault Module with 5 faults)</p> <p>Motor Connection Station (Shall include one of plug-</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			in connections for a 3-phase motor) Student Curriculum or Manual and with Teacher's Assessment/ Portfolio Guides				
	3	Electrical Measuring Instruments	<ul style="list-style-type: none"> • Phase Sequence Indicator (Indication of the three phase via LCD, Indication of the phase rotation direction via LCD, Swift determination of the phase sequence in thee phase) • Voltage Range: 40 to 700 V • Frequency range: 15 to 400 Hz • Safety Complying with: IEC 61010/EN61010, IEC61557-7/EN61557-7 • Current Consumption: approx. 1 mA @ 700 V • Digital Storage Oscilloscope (4 channel, 60 MHz, 5V/div Maximum vertical sensitivity, 2mV Minimum vertical Sensitivity 50s/div Maximum time base, 5ns/div minimum time base, TFT LCD, 2mV minimum vertical sensitivity) • Clamp Meter Features and Benefits (Peak hold, Switchable low pass filter, TRMS measurement) • Troubleshooting of RCD nuisance tripping (Periodic measurement of leakage current @50 Hz to check 	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			for insulation deterioration, Accurate measurement of triple neutral current and other distorted waveforms, Differential current measurement for appliance testing, Auto ranging) • Safety category voltage: 300 V, 600 V, 1000 V Safety category level: CAT II, CAT III, CAT IV • Absolute maximum resistance: 600k Ohm • AC current measurement resolution: 0.001mA • Best AC Current Accuracy: 1% + 8 digits, Best AC Voltage Accuracy: 1 % + 3 digits, Best DC Voltage Accuracy: 1 % + 2 Digits • Tachometer (Optical and Mechanical measurement of rotation speed, Rotation speed, speed and length measurement, Memorization of min. and max. values as well as the last value at power down, Automatic Stop • Rotation speed: 1.00 to 99,999 rpm optical, 1.0 to 19,999 rpm mechanical • Speed: 0.10 to 1999 m/min. • Accuracy: +/- 0.02% full scale (=/- 1 digit)				
	4	PLC Motor Control Learning System	11-Gauge Steel Panel featuring: • Compact PLC- Micro Logix 1000 or 1200 PLC	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • 16 digital Input-24Vdc • 12 digital output relay • Power input; 220-240-VAC / 60Hz. • Connecting cables (300/ 1m. long) • AC Inputs (10) • Relay Outputs (6) <p>Accessories:</p> <ul style="list-style-type: none"> • Programming cable software • Power input- 220 V/ 60 Hz • Simulator: 24 VDC • 1 green push button (N.O.) • 1 red push button (N.C.) • 2- 3PSP Selector switch <p>Output simulator:</p> <ul style="list-style-type: none"> • Buzzer 24 VDC • 10 indicator lamp/ 24 VDC • Short circuit protection features; <p>Mounting required: Panel type w/ aluminum frame stand</p> <p>Student Curriculum and students manual</p>				
	5	Reduced Voltage Starting Learning System	<p>Each station includes the following components:</p> <p>Power Resistor Station (3 pcs.)</p> <p>Power Resistor Stations - (3 pcs.) 25 ohm, 100 watt</p> <p>Dual Transformer Station (2 pcs.)</p> <p>Control Transformers</p>	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			(250VA minimum) multiple tap primary (208, 277, 380 (VAC) single tap secondary (120 VAC) and with; Student Curriculum or Student manual				
	6	Electrical Machines Learning System	<p>Assembly system for rotating electric machines It includes the following components: Base plate, Supports with bearing, Coupling joints, Flexible coupling, Electronic speed transducer, Assembling screws, Wrenches, DC stator, AC stator, Rotor with commutator, Brush holder with 2 brushes, Cage rotor, Ring rotor, Brush holder with 6 brushes</p> <p>POWER SUPPLY Outputs in AC: <ul style="list-style-type: none"> • Three-phase: 24 V/ 14 A, 42 V/ 10 A • Single-phase: 0 – 48 V/ 5 A, 0 – 10 V/ 12 A Outputs in DC: <ul style="list-style-type: none"> • 32 V/ 14 A, 42 V/ 10 A, 0 – 40 V/ 5 A, 0 – 8 V/ 12 A <p>Three-phase power supply from mains.</p> <p>LOADS AND RHEOSTAT <ul style="list-style-type: none"> • resistors: 3x15 Ohm, 90 W each, 1 Ohm + (0 – 2 Ohm), 80 W </p> </p>	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> capacitors: 3 x 80 μF, 150 V rheostat: 0 - 80 Ohm, 1 A <p>ELECTRICAL POWER DIGITAL MEASURING UNIT Measurement in direct current of: voltage, current, power and energy. Measurement in alternate current of: voltage, current, power, active energy, reactive energy, apparent energy, cos phi and frequency.</p> <p>Main technical features:</p> <ul style="list-style-type: none"> DC voltage: 300 VDC DC current: 20 ADC AC voltage: 450 VAC AC current: 20 AAC Power: 9000 W Power supply: single-phase from mains <p>• Communication: RS485 with MODBUS RTU protocol.</p> <p>ADAPTER BRACKET Necessary for connecting the locking device, the brake or the drive motor.</p>				
	7	Pneumatics & Electro-Pneumatic Training Set	<p>The Electro-pneumatic training set includes basic pneumatic training components. The user can train on the basics of electro-pneumatic control.</p> <p>Training Contents:</p> <ol style="list-style-type: none"> Physical principle of electro-pneumatics 	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			2. Function of electro-pneumatics training set 3. Relay control circuit 4. Electric self-holding circuit 5. Feature of magnetic proximity switch 6. Electric sequence control circuit 7. Step diagram Consist of: 1. Push button switch set 2. Relay 3-fold - 2 Units 3. Limit switch electrical, left and right actuated 4. Optical sensor 5. Electric proximity switch 6. 3/2 way solenoid valve (N/C) 7. 5/2 way single solenoid valve - 3 units 8. 5/2 way double solenoid valve - 3 units 9. Pressure switch 10. One-way flow control valve - 4 units				
Sub-total, Electrical Installation and Maintenance NC III							18,964,410.752
6	Food Processing						
	1	Food Processor	Heavy Duty, 5 liters, stainless steel bowl, 220 V/ 60 Hz, 1 Hp	1	unit	1	
	2	Water Boiler	30 liters capacity, stainless steel, 220 V/ 60 Hz	1	unit	1	
	3	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase	2	unit	1	
	4	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit	1	
	5	Stove with Oven	Heavy duty; four burner gas stove with oven; cast	10	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000				
	6	Dehydrator	single chamber, 15 trays, stainless steel, 220 V/ 60 Hz	1	unit	1	
	7	Exhaust Hood	60 cm width; heavy duty; stainless steel; wall mounted	10	unit	1	
	8	Smoke House	1 door, 220 V/ 60 Hz, single phase, Dimension: 0.440 m ³ - 1.62 m ³	1	unit	1	
Sub-total, Food Processing							3,386,089.916
7	CNC Lathe and Milling Machine Operation NC III						
	1	CNC Milling Machine	<p>General Specifications: CNC Vertical Milling Machine Table Size: Length 750 mm - 1000 mm; Width 350 - 550 mm, Table Load Capacity: 500-1400 kg, Travel X-axis: mm - 850 mm, Y - axis: 400 mm - 600 mm, Z - axis: 500 mm - 600 mm, Maximum Spindle speed: 8,000 - 12,000 rpm; Direct Drive, Spindle Taper: BT 40, Tool Storage Capacity: 20 tools - 30 tools only, Electricals: 220 volts / 3 phase / 60 Hz, Spindle Motor Power: 20 hp - 30 hp, Max Rapids on (x, y, z): 25.4 m/ min - 42 m/ min; Servomotors on all axes, 4th Axes Drive and wiring, Coolant system, Max tool diameter: 80 -95 mm, bearing lubrication: air / oil/ grease injection</p> <p>Important features Included:</p>	1	unit	3	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>• 3 Units External CNC CONTROLLER SIMULATOR (Stand-alone exact replica (duplicate) of the CNC Controller of the machine for off-machine training on CNC programming, operation and simulation) • 4th Axis Rotary Table (Can be mounted horizontal / vertical, Worktable diameter: 160mm -350mm diameter, Accuracy: ±15sec, Servo Motor, complete with accessories)</p> <p>Machine Accuracy & Control Specifications</p> <ul style="list-style-type: none"> • Control type - Dialog, Conversational/ Intuitive Programming Sys. /EIA/ ISO PROGRAMMING • Working Memory - 2 mb up to 1 gb <p>Minimum features and accessories included:</p> <ul style="list-style-type: none"> • Fully enclosed machining center • USB port • ethernet interface • Automatic tool length measuring device/ Touch probe • Automatic voltage regulator 30KVA, 3 Phase, 220V • Air Compressor • Specified machining tool list: • 1 pc Drill Chuck • 1 pc Drill Chuck arbor BT 40 				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • 5 pcs Quick Change Milling (Collet) Chuck • 10 pc pull studs • 15 pc Collets (3-25 mm) • 1 pc Face mill arbor • 20 pcs Carbide Inserts • 1 set HSS End mills • 1 set HSS Drill Bits • 1 pc BT 40 Spindle taper cleaner • 1 pc mill vise • Coolant (pail) - 1 pc. • With operations/ maintenance manual in English Language • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 				
	2	Lathe Machine (Conventional)	<p>General Specifications:</p> <p>Horizontal Lathe Capacity</p> <ul style="list-style-type: none"> • Max swing over bed: 380 mm - 560 mm • Max swing over gap: 600 mm - 780 mm • Max swing over cross-slide: 200 mm - 380 mm • Distance between centers: 1000 mm • Bed width: 220 mm - 350 mm • Cross slide travel: 230 mm - 300 mm <p>Main Spindle</p> <ul style="list-style-type: none"> • Spindle bore: Φ50 mm - Φ80 mm • Max Spindle speed: more than 1600 rpm <p>Tailstock</p>	1	unit	3	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • Tailstock spindle taper: MT 3, 4 or 5 Threading • Metric pitch threads: 0.2-14 mm/ pitch • Inch pitch threads: 2-75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds: 0.04-1 mm/rev • Range of cross feeds: 0.02-1.25 mm /rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply: 220 volts 60hz • Phase: 3 phase • Main spindle motor: 5 - 10 hp • Coolant pump motor: 1/8 hp <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck, 4 Jaw chuck , Face plate • 1 pc - live center , dead center • 1 pc - Steady rest, follower rest • 1 set - lathe dog (straight and bend tail) • 1 set tool holder (left hand, right hand, neutral & threading tool) • 1 pc - drill chuck with arbor • quick change tool post • with Operations/ maintenance manual in English • With Digital Read Out 				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • with sleeve for MT 4 and MT 5 Machines • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 				
	3	Milling Machine (Conventional)	<p>General Specifications: Vertical Turret Type Milling Machine</p> <ul style="list-style-type: none"> • Table Size: Length 1270 mm x Width 254 mm • Longitudinal Travel (x): 800 mm - 950 mm • Cross Travel (y): 305 mm - 410 mm • Vertical Travel (Knee)(z): 305 mm - 410 mm • Max work piece weight: 300 - 400 kg • Spindle Motor: 2 hp to 3 hp • Maximum Spindle Speed: 2500 rpm-5500 rpm • Electricals: 220 V/ 3 phase/ 60 Hz <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 set - Dividing Head gear ratio 40:1 w/ sets of gear, footstock, 3 indexing plates, sector arm • 2 sets of module cutter (mod 1.5, 2.0, 2.5) 	1	unit	3	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • Spindle Arbor/ Milling Arbor • with operations/ maintenance manual in English Language • 1 year warranty for spare parts and 2 years in support service • Includes Machine Commissioning and Training 				
Sub-total, CNC Lathe and Milling Machine Operation NC III							40,624,320.006
8	Welding						
	1	SMAW/ GTAW Welding Machine	<ul style="list-style-type: none"> • Input power: voltage/Phase/ Hertz: 208 -230/ 1/ 50/ 60, • Output range: 40-300A AC/DC • Duty cycle: at least 40 - 60% • Output Current Voltage (OCV): 50 - 80 V • With Built - in High Frequency • with Maintenance / Operation Manual in English Language • Complete accessories: Electrode holder, heavy duty Heavy duty ground clamp TIG torch assembly Gas regulator with remote control (foot/hand) Power cables and welding cable 	8	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	2	GMAW/ FCAW Welding Machine	<ul style="list-style-type: none"> • Process: GMAW, Flux Cored AW • Max. Open Current Voltage (OCV): 38 - 70 V • Wire speed: 50 – 700 IPM • Wire size range: 0.8 – 1.2mm • Complete accessories: MIG gun, Heavy duty ground clamp and cable, 230V input power cable, Adjustable Gas regulator/ flowmeter and hose • Amperage range: 30-300 A • Rated output: Current/ voltage/ duty cycle 250A/ 26V/ 40% • Input power: voltage/ Phase/ Hertz: 208 -230/ 1/ 50/ 60 	8	unit	2	
	3	Plasma Cutter	<ul style="list-style-type: none"> • Maximum Cutting Capacity: 22.2 mm (7/ 8") • Input Power: 208-575 V/ 1/ 3 P/ 50/ 60Hz • Rated output: 96-104V @ 40-50% duty cycle • Input Current: 37.8 - 60 A • Output Range: 20 - 60 A • Complete accessories: Hand torch, Power cables, Air regulator and pressure gauge, 20 feet cable, Work clamp and cable • Air compressor: at least 3 h, 1 phase/ or Delivery range 70 - 115 psi 	2	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			(pressure capacity), • with Maintenance / Operation Manual in English Language				
	4	Stationary Electrode Oven	For Stick Electrode and MIG Wires • Capacity: up to 300 lbs (136 kg) • Electrode length: up to 18 in. (450 mm) • Temperature range: 100 – 550 °F (38-288°C) adjustable (w/ thermostatic control and thermometer) • Input Voltage AC: 220 V/ 60 Hz • Heating Element: 1000 W • with Maintenance / Operation Manual in English Language	1	unit	2	
	5	Ultrasonic Flaw Detector	• Portable Phased Array Instrument for NDT (Non- Destructive Testing) 16PA • Phased Array Probe, 4 MHz, 16 element, 0.5mm pitch • Phased array Wedges, ranging 35-75 degrees shear capacities for 0012 & 013 probes/ Phased array wedges transducers for different degrees (45°, 60°, 70°, etc.) • Keypad: English, International, Language: English • Battery type: Lithium-ion rechargeable standard,	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			(Lithium-ion / alkaline) including Battery charger: 220 VAC, 50 - 60 Hz • Operation manual • Standard Software's, CD, Removable SD Memory Card, SD adaptors to USB • Couplant-glycerin • Display Type: Full VGA multi-colored/ transfective color LCD, 60 Hz update rate • With complete accessories to operate including its featured functions, • Angle beam transducers, pulser, adaptors, calibration block and others`. • Transducer connections: BNC or Number 1 LEMO				
	6	Oxy-acetylene Welding/ Cutting Outfit	Complete accessories: • Oxygen and Acetylene Regulators • blow pipe torch handle • cutting and welding tips • cutting torch or equal pressure cutting attachment for acetylene and alternative fuels, twin hose • tip cleaner, spanner and flint lighter	3	unit	2	
	7	Lathe Machine (Conventional)	Lathe Machine, General Specifications: Horizontal Lathe • Max swing over bed - 350 - 560 mm	1	unit	2	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • Max swing over gap – 500 - 780 mm • Max swing over cross-slide - 150 - 380 mm • Distance between centers- 500 - 1000 mm • Bed width- 150 - 350 mm • Cross slide travel - 150 – 300 mm <p>Main Spindle</p> <ul style="list-style-type: none"> • Spindle bore - $\Phi 30$ - 80 mm • Spindle speeds - 0-5000 rpm 18 steps <p>Tailstock</p> <ul style="list-style-type: none"> • Tailstock spindle diameter - 40 - 75 mm • Tailstock spindle taper – MT 3 or MT 4 <p>Threading</p> <ul style="list-style-type: none"> • Metric pitch threads - 0.2 -14.0 mm / pitch" • Inch pitch threads - 2- 75 TPI <p>Feeding Range</p> <ul style="list-style-type: none"> • Range of longitudinal feeds - 0.04 -1 mm/ rev • Range of cross feeds – 0.02-1.25 mm/ rev <p>Motor</p> <ul style="list-style-type: none"> • Power Supply – 220 volts, 60hz • Phase – 1 or 3 phase • Main spindle motor - 3 - 7.5 hp • Coolant pump motor – .125 HP (1/8" hp) <p>Accessories included:</p> <ul style="list-style-type: none"> • 1 pc - 3 Jaw chuck with internal and external jaws, • 1 pc - 4 Jaw chuck, • 1 pc - Face plate, 				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<ul style="list-style-type: none"> • 1 pc - live center, • 1 pc - dead center, • 1 pc - Steady rest, • 1 pc - follower rest, • 1 set - lathe dog (straight and bend tail), • 1 set tool holder (straight, left, right), • 1 pc - drill chuck with arbor, • quick change tool post, • with Operations manual (English) • 1 year warranty for spare parts and 2 years in support service 				
	8	Pencil Grinder	High speed die grinder Capacity: Collet- 6 mm to 8 mm 220 - 240 VAC No load speed: 7,000 - 28,000 rpm Continuous rating input: 400 - 750 W	3	unit	2	
Sub-total, Welding							17,363,932.554
9	Refrigeration and Air-Conditioning Servicing NC III						
	1	Variable Refrigerant Frequency Air Conditioning Unit with Central Controller	8 HP capacity outdoor unit with 4 fan coil unit (FCU) 1 HP wall mounted 2 HP ceiling suspended cassette type (FCU) 220 volts 1 phase 60 hz	2	unit	3	
	2	Inverter Type Air Conditioning Unit (Cassette)	PACU cassette type A/C unit; 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3.0 tons	4	unit	3	
	3	Inverter Type Air Conditioning Unit (Ceiling Concealed)	Package type A/C unit, ceiling concealed ducted inverter split type, 5.0 kw, 220 volts, 60 hz, 2 hp capacity	4	unit	3	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	4	Inverter Type Air Conditioning Unit (Floor Mounted)	Split type A/C unit , floor mounted, 220 volts AC, 60 hz, 3 phase, 4 hp capacity, 3 TR	4	unit	3	
	5	Inverter Type Air Conditioning Unit (Wall Mounted)	Split type A/C unit, wall mounted, 220 volts, 60 hz, 1 phase, cooling capacity, 10 kw, 3 hp capacity	4	unit	3	
	6	Oxy-acetylene with Complete Accessories	With complete accessories, cuts up to 15 mm, welds up to 5 mm with torch handle, equal pressure cutting attachment for acetylene and alternative fuels, mixer, 3 welding tips, cutting tips, single stage cylinder regulator for oxygen, safety goggle, igniter and flints, 10 way tank wrench, 6 m twin hose, brass handle with large flow capacity for heavy duty applications	4	unit	3	
	7	Welding Helmet (Auto-Darkening)	Auto darkening lense, wide vision, variable shade from DIN 9-13	5	pc	3	
	8	Portable Arc Welding Machine	Inverter type portable welding machine, ground clamp, power cables and welding cables, input power 220 V, output current: 200 Ampere	4	unit	3	
	9	Leak Detector	Intended for 404A, 410A, digital type heated diode sensor with mechanical pump, sensitivity level 2, sensitivity per year 0.25 ounce/ year, CFC's,	4	unit	3	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			HCHF and HFC, sensor 2D alkaline batteries spare, filter and hard plastic carrying case, unit cases heated diode sensor technology automatically compensate for changing background, contamination				
	10	Anemometer SE	Digital type, measuring the current wind speed with minimum and average values, temperature display and perceive temperature (wind chill), wind strength can be set as meter, m/s, km/h, mph, knots	5	unit	3	
	11	Refrigerant Recovery Machine (Hydrocarbons)	220-240 VAC, 60hz, with recovery tank of 50 lbs capacity, direct liquid of 3.03 lbs per minute, direct vapor of 0.03 lb per minute, push/pull of 12.22 lbs per minute	4	unit	3	
	12	Vacuum Pump	Two-stage, 220 VAC, 60 hz, single phase, 5.0 CFM capacity	4	unit	3	
	13	Portable High Pressure Washer	220 volts, 60 hz, 1 hp capacity, single phase	5	unit	3	
	14	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	4	unit	3	
	15	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase	4	unit	3	
	Sub-total, Refrigeration and Air-Conditioning Servicing NC III						17,744,811.744

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
10	Warehousing Services						
	1	Forklift Truck (Counter Balance)	Not less than 3000 mm max. lifting height capacity Lifting weight/ rated capacity- minimum 1 ton Battery Charger	2	unit	1	
	2	Forklift (Reach Truck)	Not less than 3000 mm max. lifting height capacity Lifting weight/ rated capacity- minimum 1 ton Battery Charger	2	unit	1	
	3	Trans-Stacker/ Transporter	Vertical Lift Hydraulic Dimension not lesser than 57" x 27" x 62" Not less than 1000 lbs capacity	4	unit	1	
	4	JIB Crane	1 ton capacity mobile 220 VAC, 3 phase	1	unit	1	
	5	Hand Hoist (Chain Block)	2 tons capacity heavy duty	3	unit	1	
	6	Shelving Unit	Not less than 36" x 30" x 85", 2 Layer Steel Heavy duty	17	unit	1	
	7	Trolley, Platform Type with Handle	Steel Handle Not less than 710 x 455 mm Up to 150 kg capacity With heavy duty wheels	6	unit	1	
	8	Pallet Truck	Hand Driven Steel Handle Hydraulic Not less than 2 tons capacity	3	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	9	Drum Truck Trolley/ Lifter	Self-Standing with Kick Stand 180 kg capacity Adjustable drum truck allows for transporting Tipping Not less than 1520 mm x 600 mm x 1500 mm	3	unit	1	
	10	Step Ladder, Double Sided	Not less than 8 feet Double sided	4	unit	1	
Sub-total, Warehousing Services							8,201,193.440
11	Mechatronics NC IV						
	1	Automatic Production Line Trainer	FEATURES: Automatic Production Line Trainer (APL) contains comprehensive training programs for each unit station, automatic production line, pneumatic system, frequency inverter, PLC high-speed pulse and counter, servo motor, analog, network technology, human-machine interface, and configuration technology 5 lines composed of: *Conveying unit/ Processing unit/ Feed unit/ Sorting unit/ Assembly unit Power supply: 3 phase, 5 line AC, 380 V, $\pm 10\%$, 60 Hz Rack: Aluminum and Steel Includes Service Manual and warranty Workbooks and Software	1	set	1	
	2	MPS (Modular Product System)	Input Power: AC 220 V, 60 Hz	1	set	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Output Power: DC 24 V, 3A</p> <p>Interface: 1) Digital Input/ Output (default); 2) Fieldbus: Profibus</p> <p>Includes Sub-systems 1. Distribution - separating parts from stack and feeding into a process 2. Sorting - Sorts parts by color and moves them via an electrical conveyor belt 3. Processing - Electrical rotary table models common industrial processes 4. Separator - The separating station permits the creation of flexible assembly lines 5. Handling - Modern pick and place application that moves part from pick-up point to one of several drop-off locations</p> <p>Includes Service Manual and warranty, and Workbooks and Software</p>				
	3	Human Machine Interface Package	<p>HMI Designer studio software - CD 24 voltage supply can be looped through with key panel Number of keys- 8 LED colors- red, yellow, green, blue, white</p> <p>Digital input -8 (2 additional fail safe inputs with KP8F)</p>	1	set	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			Digital output- 8 Includes Service Manual and warranty, and Workbooks and Software				
	Sub-total, Mechatronics NC IV						8,979,602.369
12	Food and Beverages Services NC III						
	1	Espresso Machine	Dual- boiler technology and saturated brewing groups Steam Boiler Capacity: 7 Liters Coffee Boiler Capacity: 3.4 Liters, Semi-Automatic, Stainless steel boilers and brewing groups, Omni-directional stainless steel steam wands, Solid stainless steel housing and base, Sight glass for water level monitoring of steam boiler, 220 V, 60 Hz	2	unit	1	
	2	Coffee Grinder	Wide grinding range, from espresso fine to a coarse drip, Revolutionary pass-through grind mechanism with 28 - 270 grind settings: 25 - 30 stepped macro settings plus a step less micro adjustment range, Convertible grinding forks- grind hands- free directly into a porta filter, or convert to grind into the included bin or your favorite dripper, Time- based grinding with three customizable presets Power: 220 V, 60 Hz, 290 watts	3	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	3	Coffee Maker	Dimensions (W x D x H cm): 22 x 26 x 28 cm Removable water reservoir: 1.4 L Pump pressure: 20 Bar Filter holder for ground coffee, pods and capsule Rapid Espresso Cappuccino System: Cup warmer Removable drip tray, 220 V, 60 Hz	5	unit	1	
	4	Juicer	1500 watts locked power juicer, 5.34 kg, juice jug capacity: 1.5 liters, pulp collector capacity: 3 liters, 220 V, 60 Hz	4	unit	1	
	5	Dinner Plates	10 inches diameter plate, ceramic/ porcelain, white in color, and round in shape	50	pc	1	
	6	Appetizer Plate	6 inches diameter; ceramic/ porcelain, white in color and round in shape	50	pc	1	
	7	Show/ Service Plates	13 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc	1	
	8	Salad Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc	1	
	9	Fish Plates	9 inches diameter, ceramic/ porcelain type, white in color and round in shape	50	pc	1	

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DAC Qualification of the 23 CenTexs**

LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	10	Dessert Plates	8 inches diameter, ceramic/ porcelain, white in color and round in shape	50	pc	1	
	11	Side Plates or Bread Plates	6 inches diameter, ceramic/ porcelain, white in color, and round in shape	50	pc	1	
	12	Soup Plate/ Bowl	3 inches deep, ceramic/ porcelain, white in color and round in shape	50	pc	1	
	13	Bouillon Cups & Saucers	Ceramic/ porcelain, Cup and Saucer - 5 inches diameter, white in color	50	set	1	
	14	Teacups and Saucers	Ceramic/ porcelain; Set of cup and saucer cup - 10 oz capacity; Saucer - 4 cm diameter; white in color	50	set	1	
	15	Tea Pots	Stainless steel micromesh filter; 42-ounce tea pot and infuser	10	pc	1	
	16	Demitasse Set	Set of cup and saucer with teaspoon; ceramic/ porcelain, 3-1/3 oz cup capacity, 4 inches long tsp, white in color	50	set	1	
	17	Dinner Spoon	Measures 8" L 18/8 stainless steel construction Dishwasher safe	50	pc	1	
	18	Dinner Forks	Measures 8" L 18/8 stainless steel construction Dishwasher safe	50	pc	1	
	19	Dinner Knives	Measures 9-1/2" L 18/8 stainless steel construction Dishwasher safe	50	pc	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	20	Salad Forks	Stainless steel Length: 22.5 cm Thickness: 8 mm	50	pc	1	
	21	Salad Spoon	Measures: 6-3/4" L 18/8 stainless steel construction Dishwasher safe	50	pc	1	
	22	Salad Knives	Stainless steel Stain resistant, dishwasher safe, 5 - 7" long	50	pc	1	
	23	Fish Knives	Stainless steel fish knives Length: 22.5 cm Thickness: 8 mm Weight: 86 g	50	pc	1	
	24	Fish Forks	Stainless steel fish fork Length: 21.5 cm Thickness: 8 mm Weight: 86 g	50	pc	1	
	25	Dessert Spoons	Stainless steel; stain resistant, durable, 4" long	50	pc	1	
	26	Dessert Forks	Stainless steel; stain resistant, durable, 6" long	50	pc	1	
	27	Cocktail Forks	Stainless steel, stain resistant, durable, 4" long	50	pc	1	
	28	Teaspoon	Measures: 6 - 3/4" L 18/8 stainless steel construction Dishwasher safe	50	pc	1	
	29	Steak Knives	Stainless steel, stain resistant, durable, 6" long	50	pc	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	30	Service Forks	Stainless steel, stain resistant, durable, 7" long	20	pc	1	
	31	Service Spoons	Stainless steel, stain resistant, durable, 7" long	20	pc	1	
	32	Steak Forks	Stainless steel, stain resistant, durable, 6" long	50	pc	1	
	33	Oyster Forks	Stainless steel, stain resistant, measure 5 3/8" long	50	pc	1	
	34	Butter Knives	Stainless steel, stain resistant, durable, 16 cm	50	pc	1	
	35	Red Wine Glasses	Stemmed glass; 12 3/8 oz. capacity, crystal glass	50	pc	1	
	36	White Wine Glasses	Stemmed glass, 9 7/8 oz capacity, crystal glass	50	pc	1	
	37	Water Goblets	Stemmed glass, 14 3/4 oz capacity, crystal glass	50	pc	1	
	38	Champagne Flute	Stemmed glass, 190 ml capacity, crystal glass	50	pc	1	
	39	Pilsner Glasses/ Ice Tea Glasses	Crystal glass; Dimension: 8" H x 3" W x 3" D; Capacity: 16 oz	50	pc	1	
	40	Wine Decanter	Capacity: 200 ml, Material: High quality Glass, Unique and elegant shape, easy to pour	10	pc	1	
	41	Waiter's Friend	Stainless steel, all-in-one corkscrew, bottle opener and foil cutter	5	pc	1	
	42	Salt and Pepper Shakers	Stainless Steel Salt and Pepper Grinder	10	pc	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	43	Rectangular Trays	Non-slip plastic tray; heavy duty construction for commercial use; rubber liner prevents slipping; stain and odor resistant	10	pc	1	
	44	Round (Bar) Trays	Non-slip plastic tray; Heavy duty construction for commercial use; Rubber liner prevents slipping; stain and odor resistant	10	pc	1	
	45	Soup Tureen	Microwave and dishwasher safe; white porcelain; covered soup tureen with ladle	10	pc	1	
	46	Peppermill	Stainless steel/ wood; 5.5 inch long	10	pc	1	
	47	Sauce Ladles	Stainless steel with end hook for hanging; heavy duty; Size: 20 cm x 4 cm	10	pc	1	
	48	Cake Servers	Stainless steel; stain resistant, durable, 5 1/2" long	10	pc	1	
	49	Ice Buckets with Tongs	Stainless Steel, 3 liters/ 0.8 gallon	10	pc	1	
	50	Boning Knives	Stainless Steel; 5 inch long; with black handle	10	pc	1	
	51	All-Purpose Knives	Stainless Steel; 8 inch chef knife; thickness: 3.0 mm; knife length: 13.5 inch; blade length: 8 inch	10	pc	1	
	52	Chopping Boards	Rubberized/ polyethylene, medium size, white in color	10	pc	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	53	Non-Stick Round (Crepe) Pan	Aluminum fry pan; non-stick coating fry pan; diameter: 16*4.0 cm - 20*4.0 cm, 26*4.8 cm; shape: round	10	pc	1	
	54	Turners (For Non-Stick Pans)	Silicone slot turner of kitchen; size: 342*82*48 mm	10	pc	1	
	55	Reach-in Chiller	Heavy duty; two door reach-in, stainless steel body; 500 liters capacity; 220 V/ 60 Hz; single phase	2	unit	1	
	56	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit	1	
	57	Water Dispenser (Hot & Cold Dispenser)	Cooling Capacity: 2 L/h Heating Capacity: 5 L/h Cold Water Temperature: 5 - 10°C Hot Water Temperature: 85 - 95°C Cooling Power: 90 W Heating Power: 550 W Compressor brand: Asbeila S30G Water Faucet Connection: Fixed Tank Material: Hot & Cold Tank Material Hot & Cold Tank Structure: Welding or belt Left & Right Side Panel Thickness: 0.5 mm Inner Silicon tube Level: Food Grade 220 V 60 Hz	5	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	58	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000	5	unit	1	
	59	Washing Machine	Top loaded, 10 kgs, 220 volts, 60 Hz, single phase, spin dry	3	unit	1	
	60	Mop Bucket with Wringer	Plastic, 32 liters capacity	5	unit	1	
	61	Ice Crusher	220 V/ 300 watts/ 60 Hz, scrapping block ice into flake ice, micro switch, container volume: 1000 ml, 304 stainless steel blade	4	unit	1	
	62	Stand Mixer	3.5 liter capacity mixer, 220 V/ 700 watts, 4 speed electronic pulse, stainless steel basket	4	unit	1	
	63	Hand Mixer	140 watts mixer, 6 speed operation, free standing base, 220 V, 60 Hz	5	unit	1	
	64	Food Processor	Heavy duty, 5 liters, stainless steel bowl, 220 V/ 60 Hz, 1 hp	3	unit	1	
	65	Steam Iron	Ceramic sole plate, output: 35 g/min, steam boost: 100 g, 2100 watts, water tank capacity: 270 ml, 220 V, 60 Hz	5	unit	1	
	66	Beverage Chiller	35 cubic feet, digital controller, 220 V/ 60 Hz, single phase	2	unit	1	
	67	Dishwashing Machine	Hood type 220 VAC/ 1 phase 800 - 1600 plates capacity per hour includes tray/ racks	2	unit	1	
Sub-total, Food and Beverages Services NC III							4,055,102.340

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
13	Commercial Cooking NC III						
	1	Freezer	Heavy duty; two door reach-in, stainless steel body; capacity: 500 liters; 220 V/ 60 Hz; single phase	2	unit	1	
	2	Reach-in Chiller	Heavy duty; two door reach-in, stainless steel body; 500 liters capacity; 220 V/ 60 Hz; single phase	2	unit	1	
	3	Stove with Oven	Heavy duty; four burner gas stove with oven; cast iron top plate; stainless steel material; BTU per hour: 15,000 - 64,000	5	unit	1	
	4	Stock Pot	Heavy duty; Four burner stove; cast iron top plate; stainless steel material; countertop	5	unit	1	
	5	Deep Fat Fryer	Heavy duty; electrical twin tank fryer; stainless steel material; countertop; capacity 10 liters; 220 V/ 60 Hz; single phase; power: 2 Kw - 17 Kw	5	unit	1	
	6	Commercial Microwave Oven	Heavy duty; stainless steel body; capacity: 17 liters; 220 V/ 20 Hz; single phase; power: 1 kW- 3 kW	7	unit	1	
	7	Dishwashing Machine	Hood type 220 VAC/ 1 phase 800 - 1600 plates capacity per hour includes tray/ racks	1	unit	1	
	8	Blender Machine	Heavy duty; stainless steel blade; capacity: 2 liters; heavy duty; 220 V/ 60 Hz/ 1 phase; power: 1.1 kW - 2.7 kW	7	unit	1	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	9	Pressure Cooker	Heavy duty; stainless steel; capacity: 9 liters	5	unit	1	
	10	Meat Slicer	Aluminum and stainless steel body material; stainless steel blade; adjustable thickness slice; 220 V/ 60 Hz; single phase	2	unit	1	
	11	Meat Grinder	Aluminum and stainless steel body material; stainless steel blade; capacity: 5 - 10 lbs per minute; 220 V/ 60 Hz; single phase; power: 0.735 kW - 1.3 kW	2	unit	1	
	12	Salamander Griller	Twin basket; countertop; stainless steel and chrome material; voltage/ frequency: 220 V/ 60 Hz; single phase	5	unit	1	
	13	Exhaust Hood	60 cm width; heavy duty; stainless steel; wall mounted	10	unit	1	
Sub-total, Commercial Cooking NC III							4,070,116.336
14	Information and Communication Technology						
	1	Laptop	i7 (2.5GHZ- Minimum Speed) 8Gb RAM DDR4 512GB SSD 4GB Dedicated Video Card 15.6" Display Mouse Wired and wireless Ethernet connection At least two (2) USB Port Windows 10 or latest OS Microsoft Office (Full Installation) Educational License	13	unit	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	2	Inkjet Printer	With Print, Scan, Copy, Fax features Tank type ink system Supports A4 and Legal Paper sizes Approximately 15 page per minute (Black) Can scan documents over network environment Photo Quality WiFi Connectivity	3	unit	23	
	3	Wireless Router	1 WAN and 4 LAN ports 802.11g, 802.11n USB port for shared printing/storage English firmware/ User interface Supports home and cloud application	3	unit	23	
	4	Smart TV	65 inch High Definition (3,840 × 2,160) SMART Features Ethernet and Wireless Connectivity USB, HDMI and A/V port with wall mount provision Multi-system compatible	1	unit	23	
	5	Tablet	128 GB Storage WiFi With installed MS Office Application	4	unit	23	
	6	Network Attached Storage	8 TB At least 2 Hard disk bay 2 LAN Port (Gigabit Interface) USB port English firmware/ User interface With file and media server Windows and MAC Compatible	1	unit	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	7	Multimedia Projector	Projection system LCD/ DLP chip technology Brilliant Color Images: with 16.7 M color reproduction Projected image size: 30 to 300 inches Distance: 1 to 13.5 meters Brightness: 5,000 - 6,000 lumens Resolution: WXGA (1024 x 768) pixels Lamp life: 3,000 hours USB port: Type Bx1 Interface: wired/ wireless	1	unit	23	
	8	CCTV System	8 Channel 1080p Digital Video Recorder; Video Format NTSC; Video Inputs: 8 channel; Video outputs: HDMI; Display Resolution: Up to 1080p; Audio Input 1 Channel, RCA Note: This supports audio input in live mode with an external microphone (not included) This port does not support recording of audio; Audio Output 1 Channel, RCA Output; Recording Compression Format H.264; Recording Resolution: 1080p; Recording Modes: Motion, Continuous, Manual; HDD Interface/ Memory Type: SATA2; HDD: 2TB installed (expandable to 4TB); Network Interface: 1 X	1	unit	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			RJ45 Operating Power: DC 12V, 8 X 1080p Cameras; Video Quality: 1080p (2.1 Megapixel); Viewing Angle: 90; Night Vision distance: Up to 100 ft.; Indoor/ Outdoor or Outdoor, IP67 Operating Temperature: 4" F - 122" F Body Construction: Aluminum, Bullet Style				
	9	Drone	<p>Max Flight Time: Approx. 30 minutes Satellite Positioning Systems: GPS/ GLONASS Gimbal Stabilization: 3-axis (pitch, roll, yaw) Controllable Range: Pitch -90° to 30° Infrared Sensing System Obstacle Sensory Range: 0.6 - 23 ft (0.2 - 7 m) Remote Controller</p> <p>Max Transmission Distance: 2.400 - 2.483 Ghz (Unobstructed, free of interference), FCC 4.3 mi (7 km), CE 2.2 mi (3.5 km), SRRC 2.5 mi (4 km); 5.725 - 5.825 GHz (Unobstructed, free of interference), FCC 4.33 mi (7 km), CE 1.2 mi (2 km), SRRC 3.1 mi (5 km)</p> <p>Battery: 6000 mAh LiPo 2S</p>	1	unit	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>Video Output Port: GL300E HDMI, GL300F USB</p> <p>Mobile Device Holder: GL300E- Built-in display device (5.5 inch screen, 1920x1080, 1000cd/m², Android system, 4 GB RAM + 16 GB ROM); GL300F- Tablets and smart phones</p> <p>Voltage: 15.2 V Battery Type: liPo 4S Vision System: Forward Vision System, Backward Vision System, Downward Vision System</p> <p>Velocity Range: ≤31 mph (50 kph) at 6.6 ft (2 m) above ground</p> <p>Altitude Range: 0 - 33 ft (0 - 10 m) Operating Range: 0 - 33 ft (0 - 10 m) Obstacle Sensory Range: 2 - 98 ft (0.7 - 30 m) Camera Sensor: 1" CMOS, Effective pixels: 20M Lens: FOV 84° 8.8 mm/ 24 mm (35 mm format equivalent) f/ 2.8-f/ 1.1 auto focus at 1 m</p> <p>ISO Range: Video 100-3200 (Auto), 100- 6400 (Manual); Photo 100-3200 (Auto), 100- 12800 (Manual)</p> <p>Mechanical Shutter Speed: 8 - 1/ 2000 s Electronic Shutter Speed:</p>				

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>8 - 1/ 8000 s</p> <p>PIV Image Size: 4096x2160, 3840x2160, 2720x1530, 1920x1080, 1280x720</p> <p>Still Photography Modes: Single Shot, Burst Shooting 3/5/7/10/14 frames, Auto Exposure</p> <p>Photo: JPEG, DNG (RAW), JPEG + DNG) Video: MP4/ MOV (AVC/ H.264; HEVC/ H.265)</p> <p>Supported SD Cards: Micro SD, Max Capacity 128 GB, Write Speed ≥15MB/s, Class 10 or UHS-1 rating required</p> <p>Charger Voltage: 17.4 V</p>				
	10	DSLR Camera	<p>Camera lens of at least 18 - 55 mm; 24.2MP APS-C CMOS Sensor Digic Image Processor; 3.0" 1.04M-DOT Vari-angle Touchscreen Full HDn 1080p; Video recording at 60 fps 45-point All Cross Type Phase; Detect AF Dual Pixel CMOS AF; Up to 6 fps shooting and ISO 25,600 built in Wi-Fi with NFC</p>	1	unit	23	
	Sub-total, Information and Communication Technology						50,920,147.212
15	Science Lab (Chemistry and Physics)						
	1	Graduated Cylinder	Polypropylene (plastic) material 10 ml capacity	10	pc	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	2	Graduated Cylinder	Polypropylene (plastic) graduated cylinder 100 ml capacity	5	pc	23	
	3	Test Tubes	Glass material Large 15 ml capacity	12	pc	23	
	4	Thermometer	Lab Thermometer: Red Alcohol, 20 to 110° C, Total Immersion Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 110° C; Divisions: 1C With permanently fused markings; packed in protective sleeving	7	pc	23	
	5	Laboratory Tong	Stainless steel 8 3/4" long	5	pc	23	
	6	Safety Goggles	Direct ventilation perforated frame Recyclable clear vinyl body Polycarbonate lens Elastic adjustable headband for secure fit, can be worn over prescription glasses	13	pc	23	
	7	Beaker	Durable glass material 250 m Borosilicate	5	pc	23	
	8	Erlenmeyer Flask	Durable glass material 250 mi Borosilicate	3	pc	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	9	Stirring Rod	Stir rod, borosilicate glass, 10 inch (250 mm) 10 inch (250 mm length x 6 mm OD) borosilicate glass stirring rod with polished ends	5	pc	23	
	10	Glass Funnel	Heavy duty borosilicate glass funnels Funnel has a well formed rim Top diameter: 4 inch (100 mm) Stem length: 4 inch (100 mm) Stem diameter: 0.35 inch (8 mm)	3	pc	23	
	11	Petri Dish	Strong borosilicate glass design Bottom dish: 60 x 15 mm (2.36 x 0.59 inch) Cover: 65 mm (2.5 inch)	4	pc	23	
	12	Watch Glass	100 mm Selected quality glass, polished ground edges	5	pc	23	
	13	Evaporating Dish	Porcelain crucible type Hemispherical shape 75 ml capacity	5	pc	23	
	14	Spring Balance	Newton's Spring Scale - 10N x 0.5N Made from anodized metal, richly plated, high impact polystyrene body with zero adjustment. Calibrated in newtons	10	set	23	

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LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	15	Vernier Caliper	<p>Science ware Digi-MAX Double scales Polymeric plastic 150 mm scale with 0.1 mm subdivisions 6 inch scale with 0.005 inch subdivisions Length: 9 inch (23 cm) Parallel jaws are 1.55 inch (40 mm) deep Inside jaws and round plastic rod depth gauge provide added value</p> <p>Upper scale: 150 mm with 0.1 mm subdivisions Lower scale: 6 inch with 0.005 inch subdivisions Molded in rigid plastic, will not scratch like metal Non-conducting, corrosion resistant, and lightweight</p>	10	set	23	
	16	Ammeters	<p>Analog Tabletop micro ammeter perfect for physics classroom demonstrations or experiments in electricity and electronics laboratories</p>	5	set	23	
	17	Biological Microscope	<p>Feature-packed entry-level biological microscope 10x eyepiece and 4x, 10x, and 40x objective lenses combine to provide powers of 40x, 100x, and 400x</p> <p>Fully coated glass optics All-metal body with monocular head 50 mm (2") mirror</p>	1	unit	23	

**Procurement of Training Tools and Equipment for the Higher Level
DAC Qualification of the 23 CentExs**

LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			<p>provides illumination to make details of specimen slides easier to see</p> <p>Basic condenser concentrates light onto the specimen</p> <p>Adjustable arm (0° to 60°) for comfortable viewing</p>				
	18	Thermometer	<p>Lab Thermometer: Red Alcohol, 20 to 150° C, Total Immersion</p> <p>Student Grade Thermometer: Red Alcohol, White Back; Length: 300 mm; Immersion: Total Range: -20 to 150°C; Divisions: 1C</p> <p>With permanently fused markings, packed in protective sleeving</p>	7	pc	23	
	19	PH Papers (Per Box)	High accuracy pH test paper, pH range from 1-14 pH 1-14 color chart in each pack, full range 1-14 80 strips per box	5	box	23	
	20	Safety Gloves	<p>Lightly powdered latex gloves</p> <p>50 pairs per pack, size 8 - 8.5 inch</p>	5	pack	23	
	21	Test Tube Brush	<p>300 mm / 12 Inch Nylon bristle mounted in heavy gauge twisted galvanized wire with loop</p> <p>Bristles approximately 25 mm (1 inch) diameter</p>	5	pc	23	

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CentExs							
LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
	22	Reagent Bottle	Dark glass with special cap/ stoppers 250 ml capacity	5	pc	23	
	23	Lens Mirror Prism	Physical Science Optical Experiments Kit Contains triangular prism, convex lens, and concave mirror fisica for Student's Optics Physics Experiment	1	set	23	
Sub-total, Science Lab (Chemistry and Physics)							1,813,619.414
16	Surveying Equipment						
	1	Total Station Surveying Equipment	3.5" Large Dual Touch-screen HD Display Android Smartphone as data collector EDM Trigger, automatically measurement key 500 Meters long range reflector less 200,000.00 points memory data upload/ download Complete surveying/ construction/ road programs on board Electronic Bubble; direct data plotting on main screen Alphanumeric Keys for easy and quick data input MS Windows Compatible; GPS data ready Data Text, DXF, CSV/ AutoCAD ready Telescope - Length: 125 - 152 mm - Magnification: 30x - Image: Erect	1	unit	4	

Procurement of Training Tools and Equipment for the Higher Level DAC Qualification of the 23 CenTEs							
LOT NO.	ITEM NO.	ITEM	AGENCY SPECS	QTY	UNIT	NO. OF BENEFICIARIES	TOTAL AGENCY ESTIMATE
			- Field of View: 1°20' - 1°30' - Resolve Power: 3" - Min. Focus Distance: 1.3 - 1.7 m Measurement Range: 1.5 to 5,000 meters				
Sub-total, Surveying Equipment							1,909,600.004
17	Air Conditioning Unit						
	1	Air Conditioning Unit	Inverter type air conditioning unit Split type AC unit, floor mounted, 4 hp, 220 volts/ 60 Hz/ 3 phase, cooling capacity: 10 kw	1	unit	3	
Sub-total, Air Conditioning Unit							557,702.640
TOTAL							229,999,986.215

Section VIII. Bidding Forms

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Bid Form

Date: _____
Invitation to Bid² N°: _____

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

Gentlemen and/or Ladies:

Having examined the Bidding Documents including 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 Bidding Documents for the sum of *[total Bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in **BDS** provision for ITB Clause 18.2 and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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:³

Name and address of agent	Amount and Currency	Purpose of 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.

² If ADB, JICA and WB funded projects, use IFB.

³ Applicable only if the Funding Source is the ADB, JICA or WB.

We certify/confirm that we comply with the eligibility requirements as per ITB Clause 5 of the Bidding Documents.

We likewise certify/confirm that the undersigned, *[for sole proprietorships, insert: as the owner and sole proprietor or authorized representative of Name of Bidder, has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the Name of Project of the Name of the Procuring Entity]* *[for partnerships, corporations, cooperatives, or joint ventures, insert: is granted full power and authority by the Name of Bidder, to participate, submit the bid, and to sign and execute the ensuing contract on the latter's behalf for Name of Project of the Name of the Procuring Entity].*


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.

Dated this _____ day of _____ 20_____.

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

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For Goods Offered From Abroad

Name of Bidder _____, Invitation to Bid⁴ Number _____. Page _____ of ____.

[illegible]

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

⁴ If ADB, JICA and WB funded projects, use IFB.

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For Goods Offered From Within the Philippines

Name of Bidder _____ Invitation to Bid⁵ Number _____ 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 Insurance 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)

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____

⁵ If ADB, JICA and WB funded projects, use IFB.

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Contract Agreement Form

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, viz., [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] (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 shall be deemed to form and be read and construed as part of this Agreement, viz.:

- (a) the Supplier's Bid, including the Technical and Financial Proposals, and all other documents/statements submitted (e.g. bidder's response to clarifications on the bid), including corrections to the bid resulting from the Procuring Entity's bid evaluation;
- (b) the Schedule of Requirements;
- (c) the Technical Specifications;
- (d) the General Conditions of Contract;
- (e) the Special Conditions of Contract;
- (f) the Performance Security; and
- (g) the Entity's Notice of Award.

3. In consideration of the payments to be made by the Entity to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Entity to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract

4. The Entity hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the time and in the manner prescribed by the contract.

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.

Signed, sealed, delivered by _____ the _____ (for the Entity)

Signed, sealed, delivered by _____ the _____ (for the Supplier).

Omnibus Sworn Statement

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;
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 following responsibilities as a Bidder:
- a) Carefully examine all of the Bidding Documents;
 - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
 - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
 - d) Inquire or secure 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.

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

Signatory

Bidder's

Representative/Authorized

SUBSCRIBED AND SWORN to before me this ____ day of [month] [year] at
[place of execution], Philippines. Affiant/s is/are personally known to me and
was/were identified by me through competent evidence of identity as defined in the
2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me
his/her [insert type of government identification card used], with his/her photograph
and signature appearing thereon, with no. _____ and his/her Community Tax
Certificate No. _____ issued on ____ at _____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. _____ [date issued], [place issued]

IBP No. _____ [date issued], [place issue]

Doc. No. _____

Page No. _____

Book No. _____

Series of _____

* This form will not apply for WB funded projects.



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Bank Guarantee Form for Advance Payment

To: *[name and address of PROCURING ENTITY]*
[name of Contract]

Gentlemen and/or Ladies:

In accordance with the payment provision included in the Special Conditions of Contract, which amends Clause 10 of the General Conditions of Contract to provide for advance payment, *[name and address of Supplier]* (hereinafter called the "Supplier") shall deposit with the PROCURING ENTITY a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[bank or financial institution]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the PROCURING ENTITY on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the PROCURING ENTITY and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[date]*.

Yours truly,

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]



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BID SECURING DECLARATION FORM

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

X-----X

BID SECURING DECLARATION Invitation to Bid: *[Insert Reference number]*

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

I/We⁶, 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 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 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;
 - (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.

⁶ Select one and delete the other. Adopt the same instruction for similar terms throughout the document.

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'S
AUTHORIZED REPRESENTATIVE]
[Insert Signatory's Legal Capacity]
Affiant

SUBSCRIBED AND SWORN to before me this ____ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. _____ and his/her Community Tax Certificate No. _____ issued on ____ at ____.

Witness my hand and seal this ____ day of [month] [year].

NAME OF NOTARY PUBLIC

Serial No. of Commission _____

Notary Public for _____ until _____

Roll of Attorneys No. _____

PTR No. _____ [date issued], [place issued]

IBP No. _____ [date issued], [place issued]

Doc. No. _____
Page No. _____
Book No. _____
Series of _____



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Republic of the Philippines



Government Procurement Policy Board