University Graduate Union/Palestine
Polytechnic University
Bidding and Procurement Department

رابطة الجامعيين/محافظة الخليل
جامعة بوليتكنك فلسطين
دائرة العطاءات والمشتريات

التاريخ: **2026**/11/**22**
الرقم:ص**1075/2026/1**

استدراج عروض أسعار

ترغب رابطة الجامعين /جامعة بوليتكنك فلسطين/ باستدراج عرض اسعار لتوريد لمشاغل السيارات في كلية الهندسة ضمن مشروع النموذج الفلسطيني الاردني للتعليم المزدوج في التدريب التقني **PJ-D-VET** وذلك حسب المواصفات التالية:-

Total Price	Unit Price	Specification	Quantity	Unit	Item	No
		Technical Specification (Minimum Requirement) Equipment Type :Digital Oscilloscope Number of Channels: Two independent channels minimum Bandwidth: Not less than 15 MHz Vertical Sensitivity: From 2 mV/div to 10 V/div or wider Time Base: From 2 ns/div to 50 s/div or wider Display: Clear digital display suitable for waveform observation and measurement Measurement Functions: Voltage ، frequency, period, pulse width, maximum value, and minimum value Trigger System: Adjustable trigger level with rising-edge and falling-edge triggering Operating Functions : Auto Setup, Run/Stop, waveform hold, and signal adjustment functions Input Connectors: Standard BNC input connectors Power Supply: 220–240 VAC, 50 Hz Included Accessories: Two oscilloscope probes, power cable, user manual, and all accessories required for normal operation Warranty: Minimum one-year warranty against manufacturing defects Condition : Brand new, unused ،and supplied in the original manufacturer’s packaging	4	Device	Digital Oscilloscope – 2 Channels	1

Tel Fax 02-2228550/02-2220370 Emial: direc-purch@ppu.edu

		Technical Specification (Minimum Requirement) Equipment Type: Regulated DC Laboratory Power Supply Number of Output Channels :Three independent output channels Output Channels 1 and 2 :Adjustable from 0 to 60 V DC, Output Channel 3: Adjustable from 0 to 30 V DC Output Current Range :Adjustable from 0 to 8 A Voltage Adjustment: Continuous and precise voltage adjustment Current Adjustment: Continuous and precise current-limit adjustment Operating Modes: Constant Voltage (CV) and Constant Current (CC) modes Protection Features :Overcurrent protection, current limiting, short-circuit protection ،overvoltage protection, and thermal protection Channel Operation: Independent operation, with series and parallel tracking modes where applicable Display: Clear digital display for simultaneous indication of output voltage and current Output Terminals: Insulated laboratory terminals suitable for standard test leads and banana plugs Cooling System: Built-in cooling system suitable for continuous laboratory operation Power Supply Input: 220–240 VAC ، 50Hz Included Accessories: Power cable, output test leads, user manual, and all accessories required for normal operation Warranty: Minimum one-year warranty against manufacturing defects Condition: Brand new, unused, and supplied in the original manufacturer’s packaging	4	Device	Triple-Channel DC Regulated Power Supply	2

		Technical Specification (Minimum Requirement) Item: Electric Vehicle Power Electronics Module – Traction Inverter and/or DC–DC Converter Quantity: Four units Vehicle Variety: Each unit shall be taken from a different electric vehicle make and model Suggested Vehicle Makes BYD ،Geely, Chery, and MG, or equivalent makes commonly available in the Palestinian used-vehicle market Vehicle Type: Fully electric passenger vehicle Module Type: Original OEM traction inverter, DC–DC converter, or integrated inverter/converter power module Condition: Used, complete, and suitable for educational inspection, identification, dismantling, and reassembly Physical Condition: Housing shall be complete and free from major cracks, severe corrosion, fire damage ،or missing internal power-electronic components Identification: The original manufacturer's label, part number, or vehicle identification information shall be clearly visible Connectors: Original connectors mounted on the module shall be intact Diversity Requirement: The four supplied units shall not be identical and shall represent different vehicle power-electronics designs Included Items: Power electronics module only Excluded Items: No cables ،wiring harnesses, control units, cooling hoses, mounting brackets, test equipment, manuals, or other accessories are required Proposed Distribution : One inverter/converter module from a BYD electric vehicle. One inverter/converter module from a Geely electric vehicle. One inverter/converter module from a Chery electric vehicle. One inverter/converter module from an MG electric vehicle. Each module shall be supplied as a standalone used vehicle component only.	2	Module	Electric Vehicle Power Electronics Module Traction Inverter / DC–DC Converter	3

		Technical Specification (Minimum Requirement) Item :Electric Vehicle On-Board Charger) OBC(Quantity: Four units Vehicle Variety :Each unit shall be taken from a different electric vehicle make and model Suggested Vehicle Makes: BYD ، Geely, Chery, MG, or equivalent electric vehicle makes available in the Palestinian used-vehicle market Vehicle Type: Fully electric passenger vehicle Component Type: Original OEM on-board charger used to convert AC charging power into DC power for charging the high-voltage battery Condition: Used, complete, and suitable for educational inspection, identification, dismantling, and reassembly Physical Condition: The housing shall be complete and free from major cracks, severe corrosion, fire damage ، water damage, or missing internal components Identification: The original manufacturer's label, part number, rated input voltage, rated output voltage ،and power rating shall be clearly visible where available Connectors: Original connectors mounted on the charger shall be intact and not severely damaged Diversity Requirement: The four supplied units shall be from different vehicle models and shall not be identical Included Items: On-board charger unit only Excluded Items: No cables ،wiring harnesses, plugs, control units, cooling hoses, mounting brackets ،manuals, test equipment, or other accessories are required Proposed Distribution : One on-board charger from a BYD electric vehicle. One on-board charger from a Geely electric vehicle. One on-board charger from a Chery electric vehicle. One on-board charger from an MG electric vehicle.	2	Device	Electric Vehicle On-Board Charger (OBC)	4

		Technical Specification (Minimum Requirement) Equipment Type: Digital Function /Signal Generator Frequency Range: From 1 Hz to 20 MHz or wider Output Waveforms: Sine, square ، and pulse waveforms Output Amplitude :Adjustable from 0.1 V to 15 V Digital Output Driver: CMOS and TTL compatible output Frequency Adjustment: Continuous digital frequency adjustment Amplitude Adjustment: Adjustable output amplitude Duty-Cycle Adjustment: Adjustable for square and pulse waveforms Display: Clear digital display for frequency, waveform, amplitude, and operating parameters Output Connector: Standard BNC output connector Output Impedance: 50 Ω nominal Protection: Output short-circuit and overload protection Power Supply: 220–240 VAC, 50 Hz Included Accessories: Power cable, output test cable, user manual, and accessories required for normal operation	2	Device	Digital Function Generator	5

		Technical Specification (Minimum Requirement) Equipment Type: Isolated IGBT Gate Driver Evaluation Kit Reference Model: Texas Instruments UCC21520EVM-286 or equivalent Supported Power Devices: IGBT ، power MOSFET, and SiC MOSFET Supported IGBT Voltage :Suitable for IGBTs rated up to 600 V minimum Number of Channels: Two isolated gate-drive channels minimum Operating Configuration :Independent-channel or half-bridge operation Peak Source Current: Not less than 4 A Peak Sink Current: Not less than 6 A Electrical Isolation :Reinforced galvanic isolation Isolation Voltage: Not less than 5 kVrms Control Input: Compatible with external PWM control signals Logic Supply Voltage: Suitable for 3.3 V or 5 V control systems Gate-Drive Supply: Suitable for standard IGBT gate-drive voltage Dead-Time Control :Adjustable or configurable dead-time function Enable/Disable Function :Required Connections: Clearly identified control inputs, power-supply inputs, gate outputs, grounds, and test points Construction: Fully assembled and tested evaluation board Condition: Brand new and unused The evaluation kit shall be supplied as a complete assembled gate-driver board . The IGBT power device, external power supplies, signal generator, oscilloscope, and test accessories are not included. Acceptable reference: Texas Instruments UCC21520EVM-286 or equivalent.	20	Kit	IGBT Gate Driver Evaluation Kit	6

		Supply of a complete electronic soldering and PCB repair kit suitable for laboratory use . The kit shall include: Digital hot-air rework station ، adjustable from approximately 100°C to 480°C, with adjustable airflow and interchangeable nozzles. Temperature-controlled soldering station, minimum 60 W, with replaceable soldering tips and iron holder. Electronic soldering hand tools ، including ESD-safe tweezers, precision cutter, long-nose pliers, wire stripper, desoldering pump ، desoldering wick, PCB holder, and precision screwdrivers. Lead-free solder wire, minimum 250g. Lead-free no-clean solder paste ، minimum 20 g. No-clean soldering flux, minimum 10ml or 10 g. UV-curable green PCB solder mask ،minimum 10 ml or 10 g. UV curing lamp suitable for curing PCB solder mask. Heat-resistant silicone soldering mat. PCB cleaning brush and PCB-safe cleaning solution.	10	Kit	Electronic Soldering and PCB Repair Kit	7

		Supply of an original Fluke 179 True-RMS Digital Multimeter, suitable for electrical, electronic, automotive, and laboratory measurements, with the following minimum specifications: Measurement Type: True-RMS digital multimeter DC Voltage :Up to 1000 V AC Voltage :Up to 1000 V DC Current :Up to 10 A AC Current :Up to 10 A Resistance :Up to 50 MΩ Capacitance :Up to 10,000 µF Frequency :Up to 100 kHz Temperature :Approximately −40°C to +400°C Main Functions: Continuity test, diode test, manual and automatic ranging Additional Functions: Display Hold, Auto Hold, and Min/Max/Average recording Display: Backlit digital display with analog bar graph Safety Rating: CAT III 1000 V and CAT IV 600 V Included Items: Test leads80 ،BK temperature probe, installed battery, and user documentation Condition: Brand new, original ، and supplied in the manufacturer's original packaging	7	Device	Fluke 179 True-RMS Digital Multimeter	8

		Technical Specification (Minimum Requirement) Equipment Type: Multifunction transistor and electronic component tester Supported Components: NPN and PNP transistors, MOSFET, JFET, IGBT, diodes, Zener diodes, thyristors ،resistors, capacitors, and inductors Measurement Functions :Automatic component identification, pin identification, transistor gain, diode forward voltage, resistance, capacitance, inductance, and ESR measurement Resistance Range: Approximately 0.01Ω to 50 MΩ Capacitance Range :Approximately 25 pF to 100 mF Inductance Range :Approximately 10 µH to 1000 µH Transistor Gain Range : Approximately β 10 to 600 Zener-Diode Test Range: Up to 32 V through an independent test channel Display: Minimum 1.44-inch colour display Operation: One-button automatic testing and component recognition Protection: Anti-burn protection with automatic discharge of charged capacitors Power Supply: Built-in rechargeable lithium battery Charging: USB Type-C, 5 V DC Construction: Portable tester with replaceable component test board and external test terminals Condition: Brand new and unused Reference Product: Fasizi Multifunction Transistor Tester, ASIN B0FHZNWSPT, or equivalent The offered tester shall meet or exceed the above specifications.	5	Device	Multifunction Electronic Component and Transistor Tester	9

		Supply of a digital stereo microscope suitable for PCB inspection, soldering, electronic-component assembly, and repair work, with the following minimum specifications: Technical Specification (Minimum Requirement(Microscope Type :Digital stereo zoom microscope Application: PCB inspection ،SMD soldering, electronic repair, and component assembly Optical Magnification : Approximately 7× to 45× or wider Zoom Objective ×0.7 :to 4.5× continuous zoom Eyepieces: Pair of 10 ×wide-field eyepieces Working Distance: Not less than 100mm Microscope Head: Binocular or trinocular stereo head with adjustable interpupillary distance Digital Camera: Integrated or attached digital microscope camera, minimum 5 MP Video Output: USB and HDMI output Display: External monitor or integrated display suitable for real-time viewing Illumination: Adjustable LED ring light Stand: Heavy-duty adjustable boom stand suitable for PCB work Focus Adjustment: Smooth coarse focusing mechanism Image Functions: Live image display, image capture, and video recording Power Supply: 220–240 VAC, 50 Hz Included Items: Microscope ، camera, LED light, stand, power adapters, cables, and required mounting parts	2	Microscope	Digital Stereo Microscope for Electronics Repair	10

		Supply of a digital electronic heating plate suitable for PCB preheating, SMD reflow soldering, component removal, and electronics repair, with the following minimum specifications: Technical Specification (Minimum Requirement(Equipment Type: Digital PCB preheating and reflow hot plate Heating Power :Not less than 800W Heating-Plate Size :Approximately 200 × 200 mm Heating-Plate Material :Aluminum or aluminum-alloy heating surface Temperature Range: From room temperature up to at least 400°C Temperature Control : Microcomputer-controlled adjustable temperature Display: Digital LCD temperature display Applications: PCB preheating ، solder-paste reflow, SMD soldering and desoldering, BGA and IC component removal Heat Distribution: Uniform heating across the working surface Controls: Temperature setting and power-control buttons Power Supply: 220–240 VAC, 50 Hz Construction: Stable bench-top metal housing Condition: Brand new and unused	3	Device	Digital PCB Preheating and Reflow Hot Plate	11

		Supply of a universal high-speed memory programmer kit suitable for electronic-board repair, firmware programming, BIOS servicing, and reading/writing memory integrated circuits, according to the following minimum specifications: Technical Specification (Minimum Requirement(Equipment Type: Universal eMMC ،NAND, NOR, EEPROM, SPI Flash, EC and MCU programmer Programming Methods: Offline programming and in-system programming (ISP) Supported Memory Devices: eMMC ،EEPROM, SPI NOR Flash, Parallel NOR Flash, SPI NAND, Parallel NAND, OneNAND ،MCP and EMCP Supported Applications : Television boards, computer and laptop motherboards, monitors, automotive electronic modules, navigation systems and other electronic control boards Main Functions: Read, write ، erase, verify, automatic chip identification and firmware backup eMMC Functions: Recognition and programming of BOOT, USER, RPMB and GPP memory areas Universal Socket: 48-pin universal programming socket NAND Support: NAND Flash devices with capacity up to 64 GB minimum ISP Interface: In-circuit serial programming interface Additional Interfaces: USB 2.0 ، VGA and HDMI programming interfaces Programming Speed: High-speed programming through USB connection Computer Compatibility :Software	1	Device	Universal eMMC/NAND/Flash Programmer Kit	12

		compatible with Microsoft Windows 10 minimum Adapters: Minimum 21 programming adapters suitable for TSOP, SOP, SOIC, SSOP, PLCC, eMMC, NAND and laptop EC devices Included Cables: USB, VGA, ISP ، ICSP, FFC and required programming cables Included Tools: IC extractor and required socket adapters Software: Programming software ، device database and available software updates Condition: Brand new and unused The kit shall be supplied complete with the RT809H programmer, a minimum of 21 compatible adapters ،programming cables and all components required for normal operation. Acceptable reference: DHRUVPRO RT809H eMMC-NAND Flash Programmer Kit with 21 adapters and cables, or equivalent.				
		Supply of an original Xhorse VVDI PROG Programmer, software version V5.3.8 or later ،suitable for automotive electronic-module programming and repair, with the following minimum specifications: Technical Specification (Minimum Requirement(Reference Model: Xhorse VVDI PROG, model XDPG00GL, or equivalent Supported Devices: Automotive EEPROM, Flash memory, MCU, ECU, immobilizer, dashboard and airbag modules Main Functions: Reading ،writing, erasing, verifying and saving supported chip data Programming Modes: On-board programming, in-circuit programming and programming through compatible adapters	1	Device	Automotive ECU, MCU and EEPROM Programmer	13

		Supported Chip Families : Supported EEPROM, NEC, Motorola, Fujitsu, Renesas, ST, Infineon and other automotive chip families Immobilizer Applications :Reading and writing supported IMMO, CAS, FEM, BDC, EWS, EIS and BCM data Communication: High-speed USB connection to a computer Software: V5.3.8 or the latest available version at the date of delivery Software Functions: Device selection, connection diagrams, data reading, writing, verification and file management Languages: Multi-language software, including English and Arabic Updates: Online or manufacturer-provided software and firmware updates Included Items :Main programmer, power adapter, USB cable ،MCU cable, ECU cable, EEPROM adapters, connection cables and standard manufacturer-supplied accessories Computer Compatibility : Compatible with Microsoft Windows Condition: Brand new, original and supplied in the manufacturer's original packaging The supplied programmer shall be an original Xhorse product and shall include all standard adapters and cables provided with the complete manufacturer's package. Required model: Xhorse VVDI PROG V5.3.8 or later, or equivalent.				
	Total Price Euro					**

❖ على الشركات الراغبة في تعبئة العرض تعبئة الجدول ضمن الشروط التالية:-

- الأسعار باليورو غير شامل ضريبة القيمة المضافة.
- الرجاء إرفاق شهادة خصم مصدر سارية المفعول مع العرض.
- **يمكن إرسال العرض بظرف مغلق لدائرة المشتريات في مبنى رابطة الجامعيين – عين سارة او عن طريق الايميل** direc-purch@ppu.edu.
- **لجنة المشتريات غير ملزمة بأقل الاسعار، ويحق لها زيادة او انقاص الكميات.**
- مدة الصرف خلال ثلاثون يوم من تاريخ الفاتورة.
- آخر موعد لتسليم العروض في الساعة الثانية عشر والنصف ظهراً من يوم الاحد الموافق 2026/11/29.
- لمزيد من الاستفسار يمكن الاتصال مع م. علاء جلال التميمي على جوال رقم 0599728123 خلال الدوام الرسمي.

خاص بالمورد

اسم الشركة: .....العنوان:.....

رقم الهاتف :.....رقم الفاكس:.....رقم جوال.....

Email:.....

التوقيع والختم الرسمي