TENDER DOCUMENT

Procurement of Scientific Equipment/Instrument, Machinery and Sports etc for University of Sindh for the year 2025-2026

Name of Company / Contractor: _____

Address: _____

Contact No.: (Tel)_____(Mob)_____

Email: _____

Bank Challan / Demand Draft of Rs. 5,000 (No. _____ Dated: _____)

Tender publishing date	**:**	**10-06-2026**
Tender submission Time	**:**	**25-06-2026 11:00 AM**
Tender opening date	**:**	**25-06-2026 11:30 AM**
Tendering Process	**:**	**SINGLE STAGE – ONE ENVELOPE**

Central Scientific Procurement,
Allama I.I. Kazi Campus, University of Sindh, Jamshoro-76080.
Phone No. 022- 9213203 | Email: Incharge.css@usindh.edu.pk

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1. Introduction

Dear Tenderer

Thank you for the interest you have shown in response to the advertisement of University of Sindh which has been floated on University of Sindh & SPPRA websites for "**Procurement of Scientific Equipment/Instrument, Machinery and Sports etc for University of Sindh for the year 2025-2026**

The University of Sindh, the oldest University of the country, was constituted under the University of Sindh Act. No. XVII of 1947 passed by the Legislative Assembly of Sindh. The Act was subsequently revised and modified in 1961 and later. The Act of 1972 under which the University is presently functioning provided for greater autonomy and representation of teachers.

We expect to avail services/works/items of high standards meet our prime & basic specifications through this transaction.

Please contact the undersigned for any information and query.

Thank you.

Incharge,
Central Scientific Procurement,
University of Sindh, Jamshoro-76080.

Important Note

1. Tender bids must be submitted electronically through EPADS, any clause in this tender document asking for manual submission must be replaced and read as “through EPADS”
2. Kindly attach a copy of Bid Security with the proposal through EPADS and submit physically at the time of Bid opening.
3. In accordance with the established protocols, if a bid is not reflected in the bid opening list in EPADS, it shall be deemed and treated as a "bid not submitted." Therefore, all participants are advised to verify the inclusion of their submissions in the bid opening list to avoid any misinterpretations regarding their bid status.

2. Instructions

(a) The University of Sindh (UoS) expects that aspirant manufacturers / firms / supplier / companies / distributors / dealers should furnish all the required documents to ensure a transparent and genuine presentation. Therefore, it is necessary to fill in the Tender Form meticulously and sign & stamp each and every page. Moreover, attach required supporting document according to the requirement.

(b) It is of utmost important to fill in the Tender Form in writing in ink or type. Do not leave any column/item blank. If you want to leave the item/column un-answered please, write 'Doesn't Apply/Doesn't Arise'. If you need more space please attach a paper & clearly mention item/column name or number etc that referred the column/item of the Tender Form.

(c) You can collect the Tender Document from the office of the Incharge, Central Scientific Procurement @ Faculty of Engineering & Technology, University of Sindh, Jamshoro-76080 or download from SPPRA EPADs and website of University of Sindh, Jamshoro from **10-06-2026 to 25-06-2026**.

(d) The last date of submit the Tender Document in EPADs/sealed envelope is **25-06-2026 11:00 am** at the Incharge, Central Scientific Procurement @ Faculty of Engineering & Technology,University of Sindh, Jamshoro-76080. The Tender will be opened **on 25-06-2026 at 11:30 am** in the presence of representatives who may care to attend while the same be submitted at SPPRA E-PAD System till last date.

(e) Bid Security of **3%** of total charges will be submitted along with Tender Documents in shape of PAY ORDER / DEMAND DRAFT/Bank Guarantee only in the name of University of Sindh Jamshoro.

(f) Successful bidder should provide **5% Performance Security** of total value of Purchase Order / Work Order in the form of Pay Order or bank guarantee before submission of invoice. The Performance Security shall extend at least three months beyond the Date of Delivery/Completion of work / Contract.

(g) Please mention "Tender Number" at top left corner of the envelopes. University of Sindh Jamshoro may reject any bid subject to relevant provision of SPP Rules 2010 (Amended 2019 may cancel the bidding Process at any time prior to acceptance of bid or proposal as per Rule-25(i) of said rules.

_____
Stamp & Signature

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3. BIDDING DATA

(a) Name of Procuring Agency: Central Scientific Procurement, University of Sindh, Jamshoro.

Brief Description of Works: "**Procurement of Scientific Equipment/Instrument, Machinery and Sports etc for University of Sindh for the year 2025-2026**

Procuring Agency's address:- **Incharge, Central Scientific Procurement @ Faculty of Engineering & Technology**, University of Sindh, Jamshoro – 76080.

(b) Amount of Bid Security:- Bid Security of **Rs. 3%** will be submitted along with Tender Documents in shape of PAY ORDER / DEMAND DRAFT/Bank guarantee only in the name of University of Sindh Jamshoro.

(c) Period of Bid Validity (days):- Ninety Days (90).

(d) Performance Security Deposit: Successful bidder should provide **5%** Performance Security in the name of University of Sindh Jamshoro of total value of Work Order in the form of Pay Order or bank guarantee before submission of invoice. The Performance Security shall extend at least three months beyond the Date of Delivery/Completion of work / Contract.

(e) Deadline for Submission of Bids along with time :- The last date of submit the Tender Document in SPPRA EPADs/ sealed envelope is **25-06-2026 11:00 am** in the **Office Incharge, Central Scientific Procurement @ Faculty of Engineering & Technology**, University of Sindh, Jamshoro-76080 and SPPRA EPAD system. The Tender will be opened on **25-06-2026 11:30 am** in the presence of representatives who may care to attend.

(f) Venue, Time, and Date of Bid Opening: - Tender will be opened on **25-06-2026 11:30 am** at **Office of the Dean, Faculty of Natural Science**, University of Sindh, Jamshoro-76080

(g) Time for Completion from written order of commence: - 60 days

(h) Liquidated damages:- 2% liquidated damages of the total amount will be imposed per month for which the contractor failed to complete work within the execution period.

(i) Deposit Receipt No: Date: Amount:(in words and figures) **Pay Order / Demand Draft**

 # ……., Amount :Rs……

Drawn on Ban……..Dated……...

_____
Stamp & Signature

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4. BIDDER QUALIFICATION CRITERIA (Mandatory Documents)

Arrange the document according to numbering below and fill the columns 2 and 3. Mention each document with file leaf.

Sr.	Mandatory Eligibility Criteria (Attach Supporting Document)	Remarks Yes / No	Page No.
1.	The bidder must be registered supplier on SPPRA EPADS system. Complete Company Profile		
2.	Manufacturers / Firms / Supplier / Companies / Distributors must provide • NTN, • Sales Tax Registration Certificate both FBR and / or SRB", • Active Tax Payer Status certificate, • Professional Tax certificate		
3.	Financial Statements /Turnover Last 3 years' Average financial statements/Turn Over minimum **50.0 million** • Financial statement for last Three Years each year separately • 1st year • 2nd Year • 3rd Year • Bank Certificate		
4.	Experience Certificate The bidder must have Three years' experience of relevant field.		
5.	CNIC of Authorized Official		
6.	Affidavit on Rs.100/ Stamp paper Declaring that the contractors / companies / firms is not currently on the list of blacklisted suppliers by any government/donor agency		

5. Demand / Specification of Material

Note: Do not Change the S.# in Quoted Bids. If you are not quoting any item write NQ instead of deleting.

Do not quote as simply China in specification column, Cleary mention the specification with model/make and must add Boucher with item number on it.

S.#	Name	Required Specifications	Quantity	Unit Price with GST	Total Price with GST
1.	Analytical Balance	1mg to 500g, digital Display, Accuris or equivalent	10		
2.	Uv-Vis Spectrophotometer	Quantitative measurement, Spectrum scan, DNA\Protein test, Multi-wavelength test range 190nm-1100nm, Auto Display 7" inch color LCD and windows graphic interference, Light Source Deuterium & Tungsten lamp, Detector Silicon Photodiode Output USB/RS232, Power AC 220V/50Hz	1		
3.	Air Conditioner 1.5 Ton with installation	T3 Technology, Inverter, Energy efficient, Hot and Cool, G Boost Inverter Compressor - Stable Cooling even at High Temperature , Indoor/Outdoor Self-cleaning, Gree/Haeir/TCL or Equivalent	37		
4.	Air conditioner 2.0 Ton with installation	T3 Technology, Inverter, Energy efficient, Hot and Cool, G Boost Inverter Compressor - Stable Cooling even at High Temperature , Indoor/Outdoor Self-cleaning, Gree/Haier/TCL or Equivalent	5		
5.	pH Meter with probe	Benchtop, 0-14, Digital Display	8		
6.	Hot plate with magnetic stirrer	Upto 350 C, 1000 RPM, Digital Temperature Control & Stirring Speed Wiggens WH210 or Equivalent	15		
7.	Vacuum pump	Max. power: 270W ‣ Max. current: 2.4A ‣ Max. vacuum: 85 mbar abs. ‣ Max. flow rate: 100 L/min	4		
8.	Electric water bath	3 Holes, Digital Temperature	2		
9.	Water Aspirator Pump	Bench-top LBWP-A10 Labtron or Equivalent	2		
10.	Conductometer	Benchtop, Digital Display,	1		

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11.	Rotatory Evaporator with chiller	Rotary Speed 0~120rpm, Vacuum 0.098Mpa, Temp. Range RT~180℃, Rotary Power 80W, Rotary Bottle 1L, Collecting Bottle, 1L	1		
12.	Soxhlet Extraction Assembly With Chiller	Glass, Standard Unit	1		
13.	Drying Oven	Temp. Upto 100C, Digital Display,120v	1		
14.	Sonicator	ULTRASONIC BATH with dual frequency of 25 & 45 kHz robust quality, with ergonomic design and innovative technology. Volume : 3.5 to 4 liters Frequency : 25 & 45 kHz switchable Ultrasonic Power effective variable:100W Temperature control : 30 - 80 °C Stainless steel	1		
15.	Fruit Dehydrator	Nature Food Dehydrator Household With 5 Trays Premium Electric Temperature Control Adjustable Knob 230Watt Jackie Fruit Vegetables Herbs Nuts for Drying Beef Bpa Free Multifunctional Smart Fruit Meat Bones Tea Dehydration Drying Machine	1		
16.	Refrigerator Double Door	Medium, Inverter, Dawlance/Haeir or Equivalent	5		
17.	Hand Refractometer	Refractometer, 0-90% Brix Meter Refractometer Handheld Sugar Refractometer High Accurate Brix Measurement Meter with ATC, Beverages & Juice, Honey	1		
18.	Incubator Growing bacteria/cultures	Medium, Temp 4-75C, Door Lock, Led Display, Inner See through door	1		
19.	Kjeldahl apparatus	Protein determination (Digestion + Distillation units)	1		
20.	Deluxe Dough Maker	WF-3616 or Equivalent	1		
21.	Kitchen Scale	WF-4360 or Equivalent	1		
22.	B.P Apparatus Digital	Certeza 405 or Equivalent	1		
23.	Digital Thermometer	-10'C – 300'C	1		
24.	Professional Chopper	WF-1097W, or Equivalent			
25.	Small molding machine	Temp. upto 400C, Injection nozzle Orifice R3 mm NozzleR4.5 mm of mold, Bore Diameter 18mm	1		
26.	Zinc Selenide Crystal Disc for FTIR	Nicolet is10 or Equivalent	1		
27.	Distilled Water Machine	Stainless steel. 10L/hr	2		

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28.	Eliza Reader	EZ Read 800 Plus Eliza or Equivalent	1		
29.	X-RAY SCATTERING P7.1.2.1 Bragg reflection: determining the lattice constants of monocrystals P7.1.2.2 Laue diagrams: investigating the lattice structure of monocrystals P7.1.2.3 Debye-Scherrer photography: determining the lattice plane spacings of polycrystalline powder samples P7.1.2.4 Debye-Scherrer Scan: determining the lattice plane spacings of poly-crystalline powder samples	LEYBOLD or Equivalent	1		
30.	Electrostat field plotting set Equipment & Accessories	PHYWE,06251-88 Equivalent	1		
31.	Franck-Hertz experiment with a Hg-tube	PHYWE, P2510311 or Equivalent	1		
32.	Magnetic field of single coils/ Biot-Savart's law with a teslameter	PHYWE,P2430201 or Equivalent	1		
33.	Geiger-Mueller counter tube, 15 mm (type B)	PHYWE, 09005-00, or Equivalent	1		
34.	Magnetic induction	PHYWE, P2440201, or Equivalent	1		
35.	Deflection of electron beams in a magnetic field - Perrin tube and a pair of Helmholtz coils	LEYBOLD, D3.9.4.4_b, or Equivalent	1		
36.	Basic Science Kit, Physics: Optics	LEYBOLD, 204 405, or Equivalent	1		
37.	Deuterium Lamp assembly for Perkin Lamda 365 spectrophotometer	N 410-1036, or Equivalent	1		

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38.	Tungsten Lamp Assembly for Perkin Lamda 365 spectrophotometer	N410-1037 , or Equivalent	1		
39.	Function Generator	Frequency: 1 µHz – 2 MHz ,(Waveforms: Sine, Square, Triangle Amplitude: 0–10 Vpp, UNI-T UTG 1025 / 1010 or Equivalent	1		
40.	Basic Electrical/ Electronic circuit Lab, KL-210 or Equivalent	(A) Basic Electricity Experiments	1		
		1. Basic Measurements			
		2. DC Circuits			
		3. AC Circuits			
		4. Control Circuits			
		(B) Electronic Circuit Experiments			
		1. Diode Characteristics			
		2. Rectifiers and Filters			
		3. Diode Clipping and Clamping Circuits			
		4. Differentiator and Integrator			
		5. Transistor Characteristics			
		6. Transistor Amplifiers			
		7. Multistage Amplifiers			
		8. FET Characteristics			
		9. FET Amplifiers			
		10. OPA AMP Characteristics			
		11. Basic OP AMP Circuits			
		12. OP AMP Applications			
		13. OP AMP Comparators and Oscillators			
		(C) Digital Logic Experiments			
		1. Basic Logic Gates			
		2. Combinational Logic Circuits			
		3. Adders and Subtractors			
		4. Encoders and Decoders			
		5. Multiplexers and Demultiplexers			
		6. Arithmetic Elements			
		7. Sequential Logic Circuits			
		8. Sequential Logic Applications			
		(D) Motor Experiments (Option)			
		1. Motor start, stop and overload control			
		2. Motor forward / reverse control			
		3. Motor sequence control			
		4. Motor alternatively running control			
		5. Wye-delta reduced voltage starting of three-phase induction motor,			

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41.	Advanced Digital Logic Lab KL-310 or Equivalent	1. KL-34001 Combinational Logic Circuit Experiment	1		
		· (1) NOR gate circuit			
		· (2) NAND gate circuit			
		· (3) XOR gate circuit			
		o a. Constructing XOR gate with NAND gate			
		o b. The combination with basic gates			
		· (4) AND-OR-INVERTER (A-O-I) gate circuit			
		· (5) Comparator circuit			
		o a. Comparator constructed with basic logic gates			
		o b. Comparator constructed with TTL IC			
		· (6) Schmitt gate circuit			
		· (7) Open-collector gate circuit			
		o a. High voltage / current circuit			
		o b. Constructing an AND gate with open-collector gate			
		· (8) Half-adder and full-adder circuit (Construct HA with basic logic gates)			
		· (9) Half-subtractor and full-subtractor circuit (Subtractor circuit constructed with basic logic gates)			
		· (10) Bit parity generator circuit (Bit parity generator constructed with XOR gates)			
		· (11) Constructing a 4-to-10 decoder with TTL IC			
		· (12) The switch characteristics of TTL level conversion circuit			
		2. KL-34002 Arithmetical Logic / Tri-state & Code Converter Experiment			
		· (1) CMOS FET tristate gate circuit			
		o a. Truth table measurements			
		o b. Constructing an AND gate with tristate gate			
		o c. Bidirectional transmission circuit			
		· (2) Half-adder and full-adder circuit			
		o a. Full-adder circuit with IC			
		o b. High-speed adder carry generator circuit			
		o c. BCD code adder circuit			
		· (3) Half-subtractor and full-subtractor circuit (Full-adder and inverter circuit)			

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		· (4) Arithmetic Logic Unit (ALU) circuit			
		· (5) Bit parity generator circuit (Bit parity generator IC)			
		· (6) Hex to Dec / Dec to Hex digital conversion			
		o a. 8-digit Dec-to-Hex conversion			
		o b. 8-bit Hex-to-Dec conversion			
		3. KL-34003 Encoder, Decoder & Multiplexer Logic Circuit Experiment			
		· (1) Encoder circuit			
		o a. Constructing a 4-to-2 encoder with basic gates			
		o b. Constructing a 9-to-4 encoder with TTL IC			
		· (2) Decoder circuit			
		o a. Constructing a 2-to-4 decoder with basic gates			
		o b. BCD-to-7-segment decoder (KL-34003 block d)			
		· (3) Multiplexer circuit			
		o a. Constructing a 2-to-1 multiplexer			
		o b. Using multiplexers to create functions			
		o c. Constructing an 8-to-1 multiplexer circuit with TTL IC			
		· (4) Demultiplexer circuit (Constructing a 2-output demultiplexer with basic logic gates)			
		· (5) Digitally controlled analog multiplexer / demultiplexer circuit			
		· (6) The switch characteristics of CMOS level conversion circuit			
		4. KL-34004 Flip-flop & Sequential Logic & Counter Circuit Experiment			
		· (1) Flip-flop circuits			
		o a. Construct R-S flip-flop with basic logic gates			
		o b. Construct D flip-flop with R-S flip-flops			
		o c. Construct noise elimination circuit with R-S flip-flops			
		o d. Construct J-K flip-flop with D flip-flops			
		o e. The J-K flip-flop of delay and differential			
		o f. Construct master-slave J-K flip-flops with dual R-S flip-flops			
		o g. Construct shift register with D flip-flops			
		o h. Preset left / right shift register			

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		· (2) J-K flip-flop counters			
		o a. Asynchronous binary up counter			
		o b. Asynchronous binary down counter			
		o c. Asynchronous decade up counter			
		o d. Synchronous binary counter			
		o e. Synchronous binary up counter			
		o f. Synchronous binary up / down counter			
		o g. Johnson counter			
		o h. Ring counter			
		5. KL-34005 Oscillator / Pulse ; Load ; Up / Down Counter Circuit Experiment			
		· (1) Constructing Random Access Memory (RAM) with D flip-flop			
		· (2) 64-bit Random Access Memory (RAM) circuit			
		· (3) Erasable Programmable Read Only Memory (EPROM) circuit			
		· (4) Asynchronous four-bit binary up counter (use of 7493 IC)			
		· (5) Presetable binary up / down counter			
		· (6) Presetable decimal up / down counter			
		· (7) Construct Non-retriggerable circuit with the specialized CMOS IC			
		· (8) Construct retriggerable circuit with CMOS IC			
		· (9) Construct a variable duty cycle oscillator circuit with dual monostable multivibrators			
		6. KL-34006 Memory, Matrix LED & DAC/ADC & MCU Interface Circuit Experiment			
		· (1) Electronic EPROM (EEPROM) circuit			
		· (2) DAC0800 unipolar conversion circuit experiments			
		· (3) Bipolar output conversion circuit			
		· (4) ADC0804 8-bit SAC analog-to-digital converter experiment			
		· (5) Constructing dynamic scanning counter with single chip microprocessor			
		7. KL-34007 Digital & Analog Timer, Pulse Generator Circuit Experiment			
		· (1) Constructing oscillator circuit with basic logic gates			
		o a. Resistor-capacitor multivibrator			

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		o b. Resistor-capacitor crystal multivibrator			
		· (2) Constructing oscillator circuit with schmitt gate			
		o a. Resistor-capacitor oscillator			
		o b. Variable duty cycle resistor-capacitor oscillator			
		· (3) 555 IC oscillator circuit			
		o a. 555 oscillator circuit			
		o b. Voltage controlled oscillator circuit			
		· (4) Monostable multivibrator circuits			
		o a. Low-speed monostable multivibrator circuits			
		o b. Monostable ON/OFF delay circuit			
		o c. Monostable ON/OFF timer circuit			
		o d. Construct monostable multivibrator circuit with 555 IC			
		· (5) Numerically-Controlled Oscillator (NCO) signal generator			
		· (6) Precise-frequency function generator			
		· (7) Variable-duty-cycle NCO signal generator			
		· (8) Variable-ON/OFF delay and difference control experiments			
		· (9) Precise 15-bit symmetric / asymmetric PWM generator			
		8. KL-34008 Ramp-compare / SAR / Dual-slope ADC Experiment			
		· (1) Simple R-2R unipolar output D/A converter experiments			
		· (2) 8-bit digital-ramp A/D converter experiment			
		· (3) 8-bit successive-approximation A/D converter experiment			
		· (4) 8-bit dual-slope A/D converter experiment			
		9. KL-34009 Keyboard & Display For Stepping Motor Position Control			
		· (1) Stepper motor position / speed control experiment			
		10. KL-34010 Precise Digital Clock Timer			
		· (1) Clock experiment			
		· (2) Timer experiment			
		11. KL-34011 Universal CPLD & Breadboard Experiment			
		· (1) Create block diagram / schematic file in QUARTUS II			

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		· (2) 16-bit Hex counter · (3) 16-bit decimal counter · (4) 16-bit presetable decimal up / down counter · (5) 16-bit scanning controller for 7-segment display · (6) 16-bit up / down counter and its indication by a 7-segment display · (7) Electronic music box · (8) The traffic light with animation and time indication			
42.	Digital Analog Training System ETS-3000, or Equivalent	· Suitable for basic electric circuits, linear circuits, combinational logic, sequential logic, microprocessor circuits, and FPGA. · User-friendly comprehensive power supply, function generator / counter, digital meter, analog meter and testing devices. · Universal breadboard (1440 tie points) for circuit design, faya-Nugget breakout boards NGT-series and prototyping. · Tie points fitting solid leads AWG#22~30 (0.3~0.8mm). · USB Interface for optional fayaduino Nano board, FPGA, MCU. ·Peripheral hardware : LED, Joy Stick switch, Rotate switch, Potentiometer, Pulser switch, Rotary encoder, Data switches, Speaker, Power supply, Digital displays, Function generator / counter, DCV/DCA meter, Analog meter, etc. · Options : FPGA board (with USB Blaster), MCU board, faya-Nugget Combo Pack.	1		
43.	Ide@Lab-200 Intelligent Digitize Emulated Achievement Lab. or Equivalent	Ide@Lab-131xx : Basic Electricity · 13101 Basic Device Module · 13102 Basic Electricity Experiment Module · 13103 Magnetism Element Introduction Module · 13104 Magnetic Field Module · 13105 Ampere's Rule Module · 13106 Fleming's Rule Module · 13107 Electromagnetic Induction ide@Lab-132xx : Electronic Circuits	1		

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		· 13201 Diode, Clipper & Clamper Module			
		· 13202 Rectifier, Differential & Integral Circuit Module			
		· 13203 Transistor Amplifier Circuit Module			
		· 13204 Multi-Stage Amplifier Circuit Module			
		· 13205 FET Circuit Experiment Module			
		· 13206 OP Amplifier Circuit Module (1)			
		· 13207 OP Amplifier Circuit Module (2)			
		· 13208 OP Amplifier Circuit Module (3)			
		· 13209 OP Amplifier Circuit Module (4)			
		· 13210 OP Amplifier Circuit Module (5)			
		ide@Lab-133xx : Digital Logic Circuits			
		· 13301 Combinational Logic Circuit Experiment Module (1)			
		· 13302 Combinational Logic Circuit Experiment Module (2)			
		· 13303 Combinational Logic Circuit Experiment Module (3)			
		· 13304 Combinational Logic Circuit Experiment Module (4)			
		· 13305 Combinational Logic Circuit Experiment Module (5)			
		· 13306 Sequential Logic Circuit Experiment Module (1)			
		· 13307 Sequential Logic Circuit Experiment Module (2)			
44.	Advanced Sensor Experimental system	KL-600 or Equivalent Sensors and Transducers	1		
		Basic Components & General Sensors			
		· 1. D/A and A/D Converters			
		· 2. Characteristics of Sensors: Photo transistor, Photo interruptor, Magnetic sensor, Pyroelectric detector, Thermistor, Reed switch, Inclination sensor, Limit switch, Mercury switch, Vibration switch, Condenser microphone, Dynamic microphone			
		· 3. General-Purpose Transducers: Gas / smoke detector, Ethanol detector, Digital magnetic detector, Analog magnetic detector			
		Temperature Transducers			

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		· 4. AD590 Temperature Transducer: Characteristics and transduction circuit; Application as temperature controller and digital thermometer			
		· 5. Thermocouple: Characteristics; Transduction circuit; Application as digital thermometer			
		· 6. PT100 Temperature Transducer: R vs. T characteristic; Transduction circuit; Application as fire alarm and digital thermometer			
		Industrial & Physical Transducers			
		· 7. Humidity Transducer: Impedance characteristic; Transduction circuit; Application as digital hygrometer			
		· 8. Load-Cell: Characteristics and transduction circuit; Application as overweight alarm and digital scale			
		· 9. Linear Variable Differential Transformer (LVDT): Characteristics; Application as digital position indicator			
		· 10. Photovoltaic Cell: Characteristics; Transducer circuit; Application as auto-streetlamp controller and digital illuminometer			
		· 11. Linear Scale: Characteristics and transduction circuit; Distance measurement			
		· 12. Infrared Transducer: DC and AC characteristic tests; Application as event counter and remote controller			
		· 13. Ultrasonic Transducer: Characteristic test; Application as space disturbance detector			
		· 14. Pressure Transducer: Transduction circuit; Application of pressure transducer			
		Signal Conversion			
		· 15. V/F and F/V Converters: VFC and FVC converters; Application of V/F for FSK modulation; Application of F/V for encoders			
45.	Analog control System. ACS-1000 or Equivalent		1		
		· Laplace Transform			
		· System Simulation			
		· Steady-State Error			

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		· First-Order System			
		· Second-Order System			
		· Transient Response Specifications			
		· Effects of Zero on First-Order System			
		· Effects of Zero on Second-Order System			
		· Dominant Pole of Second-Order System			
		· Characteristics of PM DC Servo Motor			
		· Proportional Controller			
		· P Controller Used in DC Servo Motor Speed and Position Control			
		· Integral Controller			
		· I Controller Used in DC Servo Motor Speed and Position Control			
		· Derivative Controller			
		· D Controller Used in DC Servo Motor Speed and Position Control			
		· PI Controller			
		· PI Controller Used in DC Servo Motor Speed and Position Control			
		· PD Controller			
		· PD Controller Used in DC Servo Motor Speed and Position Control			
		· PID Controller (I) - Ziegler-nichols Method (1)			
		· PID Controller (II) - Ziegler-nichols Method (2)			
		· PID Controller (III) - DC Motor Position Control			
		· PID Controller (IV) - DC Motor Speed Control			
		· PID Controller Used in DC Servo Motor Speed and Position Control			
		· Inner-Loop Feedback Control			
		· Phase Lead Compensator (I) - Root Locus Method			
		· Phase Lead Compensator (II) - Frequency Domain Method			
		· Phase Lag Compensator (I) - Root Locus Method			
		· Phase Lag Compensator (II) - Frequency Domain Method			
		· Phase Lead-lag Compensator (I) - Time Domain Method			
		· Phase Lead-lag Compensator (II) - Time Domain Method			
		· Phase Lead-lag Compensator (III) - Frequency Domain Method			

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		· Pole-Zero Cancellation			
		· State Feedback / Pole Assignment			
46.	Electrical Machines system. EM-3000 or Equivalent	1. Single-Phase Transformer	1		
		· (1) Polarity test			
		· (2) Turns ratio test			
		· (3) Open circuit test			
		· (4) Short circuit test			
		· (5) Load characteristic tests: Resistive load, Inductive load, Capacitive load			
		2. Three-Phase Transformer			
		· Three-phase connections: $Y-Y$, $Y-\Delta$, $Y-Z$, $\Delta-Y$, $\Delta-\Delta$, $\Delta-Z$			
		3. DC Machines			
		· (1) DC permanent-magnet motor: Connection and motor direction control; Torque-speed characteristic			
		· (2) DC shunt wound motor: Connection and motor direction control; Torque-speed characteristic; Speed control			
		· (3) DC separately excited generator: No load saturation characteristic; Load characteristic			
		· (4) DC shunt wound generator: No load characteristic; Load characteristic			
		· (5) DC series wound motor: Connection and motor direction control; Torque-speed characteristic; Speed control			
		· (6) DC series wound generator: Load characteristic			
		· (7) DC compound wound motor: Connection, direction control, torque-speed characteristic, and speed control for both cumulative-compound and differential-compound wound motors			
		· (8) DC compound wound generator: Load characteristic of DC cumulative-compound and differential-compound wound generators			
		4. Induction Machines			
		· (1) Single-phase induction motor: Torque-speed characteristic with split-phase winding starting; Torque-speed characteristic with capacitor starting and running			

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		· (2) Three-phase squirrel cage induction motor: Connection and motor direction control; $Y-\Delta$ starting; PF correction; No-load characteristic; Blocked-rotor test; Torque-speed characteristic			
		· (3) Three-phase rotor winding induction motor: Connection and motor direction control; Blocked rotor test; Torque-speed characteristic			
		· (4) Three-phase salient pole synchronous motor: Connection and motor direction control; Excitation characteristic; Load characteristic			
		· (5) Three-phase salient pole synchronous generator: Armature resistance measurement; No load saturation and short circuit characteristic; Load characteristic; Excitation characteristic			
47.	Power electronics Training System. PE-5000 or Equivalent	· Chapter 1: Basic Measurement and Characteristic of SCR and TRIAC	1		
		· Chapter 2: Single-Phase Rectifiers and AC Voltage Controller ($AC \rightarrow DC$, $AC \rightarrow AC$)			
		· Chapter 3: Three-Phase Rectifiers and AC Voltage Controller ($AC \rightarrow DC$, $AC \rightarrow AC$)			
		· Chapter 4: DC Choppers ($DC \rightarrow DC$)			
		· Chapter 5: Inverters ($AC \rightarrow DC \rightarrow AC$)			
		· Chapter 6: Applications of Power Electronics			
48.	Programmable Logic Controller Trainer (PLC-310 MITSUBISHI PLC or Equivalent	1. Gx-developer Operations	1		
		· (1) Editing Ladder Program			
		· (2) Testing Ladder Program			
		· (3) Monitoring Status			
		2. Basic Control Circuits			
		· (1) Self-holding Circuit			
		· (2) Flashing Control			
		· (3) Inching Control			
		· (4) Single-button Control			
		3. Light Control			
		· (1) Simple Light Control			
		· (2) Complex Light Control			
		4. Traffic Light Control			

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		· (1) Traffic Light Controller (conventional) · (2) Traffic Light Controller (step) 5. Digital Clock Control · (1) 7-Segment Display Control · (2) Time Clock 6. Step Motor Control · (1) Speed and Direction Control · (2) Encoder Operation · (3) Step Motor and Encoder · (4) Step Motor's Step Display 7. Tank Filling Device Control · (1) Tank Filling Control · (2) Tank Filling Control with Thumbwheel 8. Keypad Control · (1) Keypad Operation · (2) Digital Lock Control 9. DC Motor Control · (1) PWM Speed Controller · (2) Proximity and Micro Switches · (3) Automatic Speed Control			
49.	DC Power Supply PS-3005, or Equivalent	DC power supplies used for electronics testing and prototyping, offering adjustable voltage (0–30 V) and varying current capacities,	1		
50.	DC Power Supply GPS-3030D, or Equivalent	DC power supplies used for electronics testing and prototyping, offering adjustable voltage (0–30 V) and varying current capacities,	1		
51.	LC Meter, PCE-LC1, or Equivalent	An LC meter measures inductance (L) and capacitance (C) of components using resonance methods. It's used in electronics testing, RF work, and checking coils/ capacitors. It often also tests resistance and sometimes diode/continuity.	1		
52.	TMS320C6713 Based DSP Trainer, or Equivalent	comprehensive environment for experimenting with real-time DSP algorithms and applications	1		

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53.	TMDSDSK6713, or Equivalent	The TMS320C6713 DSP Starter Kit (DSK) gives users a convenient, low cost means of evaluating the features and architecture of the TMS320C6713 Digital Signal Processor from Texas Instruments.	1		
54.	UPS	GXT-2000MTPLUSC230 Vertiv Liebert ITON GXT-2000MTPLUSC230 UPS, or Equivalent	1		
55.	Water Dispenser with fridge	Tank Capacity 3 Litres Hot, Cold and Normal Water Child Safety Lock Low Noise Design Refrigerator Cabinet 3 Taps design High efficiency compressor cooling Stainless steel water tank Indicator LEDs	16		
56.	Antenna Trainer – Motorized (GUI Based),	ATC-5000, or Equivalent	2		
57.	DSP Development Kit	TMSLCD67498 , or Equivalent	2		
58.	Router	Cisco 2800 or 2811 Series - CISCO2811 or Equivalent	2		
59.	Integrated Series Router	Cisco 4000 Series, or Equivalent	1		
60.	WS-C2960-24TT-L (Catalyst 2960 24 10/100+2 1000BT LAN Base Image),	Cisco or Equivalent	10		
61.	Compound Microscope (CX23)	Binocular up to 100x objective	5		
62.	Incubator	digital temp control	1		
63.	Soil NPK, Moisture, Temp sensor	Standard Unit	1		
64.	Glucometer with strips	High quality with 100% accurate results, Digital Display	15		
65.	Digital Microscope with Screen	6.0MP 11.6 Inch 1080p LCD Digital Display, Best Scope BLM2-241 or Equivalent	1		
66.	Haemoglobinometer	Digital Display Sensa cores Homeo Spark or Equivalent	8		
67.	Goniometer Complete Set	Universal Goniometer, 180o goniometer, Finger Goniometer, Wrist Goniometer, Large Joint Goniometer	5		

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68.	Couch/ Treatment Table	Approx. dimension 72" Lx24"Wx32"H , Adjustable Back rest by hand lever , 2 section cushioned top , leg fitted on PVC stands	5		
69.	Swiss ball set	All types & All sizes	1		
70.	Hand exercise ball set (All Types & all sizes)	All types & All sizes	3		
71.	Thera Tube (set)	Standard	3		
72.	Resistance Springs (Set)	Standard	3		
73.	Coordination exercise kit/ tools	Standard	1		
74.	Neurological assessment Kit/tools	Standard	1		
75.	Standing Mirror	Standard	1		
76.	Wrist Rotator	Standard	1		
77.	Patients Transfer Board	Standard	2		
78.	First aid box	Standard	1		
79.	Pen Torch	Standard	1		
80.	Myotomes Chart	Standard	1		
81.	Lateral slide device	Standard	1		
82.	EMG biofeedback or diagnostic equipment	multi-channel systems, real-time visual or auditory, software integration, electrode kits, visual graphs	1		
83.	Chick Incubator	Digital, Temperature and humidity calibration, Temperature display, 'C/'F changeable	1		
84.	Omron Body Composition	Standard	2		
85.	Respirometer	Digital, Standard	10		
86.	Hydro Weight Machine with Measurement Stand HF-5664	Standard	4		
87.	Tuning Fork	Standard	4		
88.	Ophthalmoscope	Standard	4		
89.	Otoscope	Standard	4		
90.	ECG Machine	12, 6 and 3 Channel Resting ECG, 8″ LCD color Touch Screen, Write-out of all 12 channels among each other or in packages (2×6, 3×4),Clearly arranged, high printout in DIN A4 format, Printout of rhythm derivation for 3- and 6-channel settings, Manual ECG monitoring or 10 seconds memory ECG for interpretation, Automatic interpretation	4		

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91.	Body Fat Caliper	Standard	1		
92.	Blood Glucose Monitor	Certeza GL 110 or Equivalent	1		
93.	Transcutaneous electrical nerve stimulation	Standard Unit	1		
94.	Therapeutic Ultrasound	Standard Voltage 220V, Application BODY Mode 3 Levels Adjustments Includes 230 ml Transfer Gel Control Touch Control Feature LED display Size 24* 24 * 11cm	1		
95.	Paraffin	wax therapy	1		
96.	Heating pad	Standard	1		
97.	Cold pack	Standard	1		
98.	Infrared machine	For Physio Therapy	1		
99.	Distillation Plant	10L, Stainless steel	1		
100	Dust Blower	Standard unit	1		
101	Pulse Oxi meter	Standard unit	1		
102	BP apparatus	Digital	1		
103	Hydro hygro meter	Standard unit	1		
104	Drone with HD camera & GPS for Areal Imaging:	DJI Phantom 4 Advanced Quadcoter or Equivalent	1		
105	Powder Pillow	Regents for Single Beam Spectrophotometer for detection of Arsenic, Cadmium, Lead, Zinc	1		
106	Scientific: English Solar System Sun Earth Moon Orbital Model, Educational Planetarium	Standard Unit	1		
107	Celestron StarSense Explorer	App-Enabled Telescope – 130mm Newtonian Reflector with Smartphon, DX 130AZ or Equivalent	1		
108	Plus total station,	Leica flexline TS06, or Equivalent	1		
109	Digital Camera	Canon EOS 2000D, 3000D Nikon D3500, D5600, D7500 or Equivalent	2		
110	PTC Tempo Thermal Cycler	Next generation of conventional PCR thermal cyclers from Bio-Rad.	1		
111	Eppendorf Research™ plus, Mechanical Single-Channel Pipettes (05-10µl)	Product Code. 15743439, Eppendorf or Equivalent	1		

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112	Eppendorf Research™ plus, Mechanical Single-Channel Pipettes (05-10µl)	Product Code. 15763439, Eppendorf, or Equivalent	1		
113	Sonicator	ultrasonic homogenizer, 750W, AC/DC input 220 V AC, Schuko plug	1		
114	Double distil water plant , (Glass assembly)	Glass (i)containers/reservoir, borosilicate glass (heat & chemicals resistance, 5 liter, ii) Lid tight – complete fitting to according double distil water supply (iii) condensers , stands & pipe for inlet and out let water	1		
115	Sphygmomanometer	Aneroid	12		
116	BMI scale for adult	Height & weight scale weight 0-180 kg Height. 80-200 cm	1		
117	Hemocytometer with complete accessories	For counting HB & WBC	6		
118	Pricking Needles	For puncture the finger	1000		
119	Pricking Pen	Lancet device tool for adjust pricking needle	24		
120	Vernier Caliper, (rechargeable)	0-150 mm (6 inch)	6		
121	Autoclave	Stainless steel, chamber capacity 10 – 50 Liter temperature range 121ºC - 140 ºC	1		
122	Animal weighing scale with bowl	Up to 500 g	1		
123	Heating Mantle	Control knob/regulator for 1000 ml round bottom flask	4		
124	Heating Mantle	Control knob/regulator for 500 ml round bottom	4		
125	Heating Mantle	Control knob/regulator for 250 ml round bottom flask	4		
126	Microtome	For tissue section	1		
127	Vacuum section pump	Pressure 0.5 ... 1.5 hPa (mb Pumping speed 25m³/h Motor speed 1500 min⁻¹	2		
128	Plethysmometer	Digital	1		
129	Stage Micrometer	Erma Stage Micrometer SM-001 or Equivalent	2		
130	Metabolic Cages, For rats	Standard Size	2		

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131	Mixer machine Blender	All Purpose mixer/blender Haier/Dawlance or Equivalent	2		
132	Vortex Mixer	LVOM-A20 Labtron or Equivalent	1		
133	CPR Training Manikin (Half Adult)	Deltoid muscle injection, With APP connection, , Artificial respiration and external chest compression., Simulation of natural airway., Airway opening and chest compression, Chest rise when airway opened.	1		
134	Compound microscope	(4x, 10x, 40x, 100x)	2		
135	Digital Vernier Caliper Stainless Steel	Measuring size in mm to cm	1		
136	Mini Centrifuge machine	Up to 15000rpm	1		
137	Fire Extinguishers (4 kg weight/Volume)	· Water-Based Fire Extinguisher	1		
138	Fire Extinguishers (4 kg weight/Volume)	· CO_2 Fire Extinguishers	1		
139	Fire Extinguishers (4 kg weight/Volume)	· Dry Powder Fire Extinguishers	1		
140	Fire Extinguishers (4 kg weight/Volume)	· Foam Fire Extinguishers	1		
141	Fire Extinguishers (4 kg weight/Volume)	· Wet Chemical Fire Extinguishers	1		
142	Portable Electric Centrifuge Machine 80-1	Good for blood/serum/plasma separation, basic lab work Speed: up to 4000 RPM Capacity: 6 × 20 ml tubes	1		
143	Stainless Steel Electric Herb/Medicinal Grinder 1kg	Multi-purpose electric grinder for herbs, spices, seeds, grains, and dried plant materials. High-speed pulverization into fine powder (good for crude drug extraction/preparation)	1		
144	Mirror less Camera, 02 extra Barites	64 GB 4k support card Professional Studio LED Light Lamp support battery and power with 6 batteries and stand with Nikon NIKKOR Z 24-70mm f/2.8 S II Lens (Nikon Z), Nikon Z5 Ii or Equivalent	3		
145	Ocular micrometer	19mm	1		

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146	Rode Microphone Bundle	Podcast Setup: Rode Podcasting Studio Bundle for 4-Persons	1		
147	Smart TV	75 Inch QNED AI 4K, LG 75QNED80T6B-AMAE or Equivalent	1		
148	Arduino Starter Kit	Includes Arduino Uno R3 Board, Breadboard, Jumper Wires, LEDs, Resistors, Buttons, Light Sensor, and Plastic Storage Box	5		
149	Generator Motor Sulf	36kv	1		
150	Handy DSLR Camera	Canon 150 or Equivalent	1		
151	CCTV System	The CCTV system shall include 08 Full HD (2MP/1080p) waterproof day/night IP cameras, an 08-channel NVR with 01TB HDD, an 08-port PoE switch, and 540 feet CAT6 cable with RJ45 connectors, with complete installation.	2		
152	Microwave Oven	Air Fryer Microwave Oven, MWO DW-550 AF AIR FRYER or Equivalent	5		
153	Electric Induction	WestPoint Ceramic Cooker WF-142 or Equivalent	1		
154	Electric Kettle	West Point Deluxe Multi-Function Kettle, 1.8L, WF-6275 or Equivalent	2		
155	Heating Microwave Oven	MWO MD 20 INV Dawlance or Equivalent	1		
156	Electric Blower	Standard	1		
157	3D scanner 4K resolution for scanning small objects	Shining3D EinScan Libre or Equivalent	1		
158	Amplifier for audio system	Standard Unit	1		
159	Speakers	Audionic Mehfil MH-40S Advance With Headgear Mic or Equivalent	2		
160	Wireless Speaker	Sony SRS XV800 X-Series or Equivalent	1		
161	LED TV 65”	Dawlance PrisMAX QLED Google TV or Equivalent	2		
162	Sound system with complete accessories	Wireless Microphone Head Set (UHF/VHF) Amplifier mixer Four Wall speakers(50-100 W) Cables & Stand	20		
163	Beck Anxiety Inventory	Complete Set	2		
164	Beck Depression Inventory Revised (BDI)II	Complete Set	2		

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165	Bender Visual Motor Gestalt Test with Clinical Use Manual	Complete Set	2		
166	California Psychological Inventory	Complete Set	2		
167	Childhood Autism Rating Scale (CARS)	Complete Set	2		
168	Children Personality Questionnaire Test	Complete Set	2		
169	Children Apperception Test (CAT)	Complete Set	2		
170	Colour Blind Test (Ishara)-38 Plates	Complete Set	2		
171	Conner's Rating Scale Revised	Complete Set	2		
172	Differential Aptitude Test	Complete Set	2		
173	Ghazali Personality Inventory	Complete Set	2		
174	Group Inventory for finding Creative Talent (GIFT)	Complete Set	2		
175	Minnesota Counseling Inventory (MCI)	Complete Set	2		
176	Minnesota Multiphasic Inventory Inventory (MMPI) Urdu	Complete Set	2		
177	Moony Problem Check List	Complete Set	2		
178	Neuropsychological Screening Test	Complete Set	2		
179	Otis Self Administrating Test of Mental Ability	Complete Set	2		
180	Raven Progressive Matrices Advanced (APM)	Complete Set	2		
181	Raven Progressive Matrices Colored (RCPM)	Complete Set	2		
182	Rorschach Psycho-Diagnostic Test	Complete Set	2		
183	Rotter Incomplete Sentence Blank Test (RISB)	Complete Set	2		
184	16 PF	Complete Set	2		
185	Thematic Apperception Test	Complete Set	2		

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186	Wechsler Adult Intelligence Scale Revised(WAIS-R)	Complete Set	2		
187	Wechsler Intelligence Scale for children (WISC)	Complete Set	2		
188	Vinland Adaptive Behavior	Complete Set	2		
189	Reflex hammers	Standard unit	1		
190	Weighing machine	Standard unit	1		
191	Examination couch/ Treatment table	Standard unit	1		
192	Sand bags	Standard unit	1		
193	Parallel bars	Standard unit	1		
194	Posture Mirror	Standard unit	1		
195	Therapeutic/ Gym ball	Standard unit	1		
196	Pillows	Standard unit	1		
197	White Towels	Standard unit	1		

List of Sports Items

S.#	Items	Specifications	Quantity	Unit Price with GST	Total Price with GST
198.	Measurement Tape	100m	5		
199.	Heart Rate Monitor	Digital	2		
200.	Heart Rate Monitor	Manual	2		
201.	Pulsometer	Digital with computer attached device	5		
202.	Hand Grip dynamometer	Digital with computer attached device	10		
203.	Stop Watches	Digital with computer attached device	10		
204.	Cones Plastic	Multi colors	30		
205.	Bowles Plastic	Multi colors	50		
206.	Medicated Adhesive Cotton Tape	2 inch	10		

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207.	Newar Tape for lining	Cotton	10		
208.	Newar Tape for lining	Plastic	10		
209.	Stepper	1’ x 2’ feet	2		
210.	Sit & Reach Boxes	Standard Size	1		
211.	Stadometer	Digital with computer attached device	2		
212.	Wooden scales Set	2m, 3m, 4m, 5m	8		
213.	Skin Fold Calliper	-	5		
	Athletics				
214.	Starting Block	Standard	3		
215.	Javelin (Male)	Standard	2		
216.	Javelin (Female)	Standard	2		
217.	Shot put (Male)	Standard	2		
218.	Shot put (Female)	Standard	2		
219.	Discuss (Male)	Standard	2		
220.	Discuss (Female)	Standard	2		
	BASKET BALL				
221.	Basket Ball	Motten Thailand or Equivalent	5		
222.	Basket Ball Net	Standard	2 Pairs		
223.	Whistle	ACME/Fox-Pro or Equivalent	5		
224.	Shin Guards	Standard	10		
225.	Keeping Gears (Goal Keeper) (Pads, Guard, Gloves and Helmet)		2 Pairs		
	HAND BALL				
226.	Balls (Men & Women)	Molten / Adidas or Equivalent	5		
	FOOTBALL				
227.	Football (Set of Five Size)	FIFA approved Balls	5		
228.	Markers	-	48		
229.	Cones	15 inches in four colors	24		
230.	Cones	9 inches	24		
231.	Corner flags with sticks	-	10		
232.	Bibs	4-colors	48		
233.	Flags for Assistant Referee	-	5		
234.	Soft Hurdles	1-feet and 2-feet height	24		

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235.	Air Pump	-	2		
236.	Agility Ladders	-	2		
	CRICKET				
237.	Cricket Batting Gloves	Adidas or Equivalent	4 Pairs.		
238.	Cricket hard ball (4 Pics)	Shield or Equivalent	4 Pairs.		
239.	Shuttle Cock	Plastic	35		
240.	Stump	Local	12 Pairs.		
241.	Tennis Balls	Shield or Equivalent	18		
242.	Skipping ropes	6 feet	3		
	Volley Ball				
243.	Volley Ball for competition	Mikasa, Japan or Equivalent	24		
	Badminton				
244.	Pairs of Badminton Eminent Rackets	Wilson/Prince/Yonnex or Equivalent	4		
245.	Rackets	Wilson/Prince/Yonnex or Equivalent	6		
246.	Shuttle cocks	Lather	05 Boxes		
247.	Shuttle cocks (Green, Blue, Red)	Plastic	02 Boxes		
248.	Nets	-	3		
	Table tennis				
249.	Rackets	Addoy Butterfly or Equivalent	4		
250.	Table Tennis Racket	Wood Butterfly or Equivalent	10		
251.	Table Tennis Racket	Rubber butterfly	6		
252.	Balls (	Nittaku or Equivalent	24		
253.	Table Tennis Balls	Sheild or Equivalent	50		
	Tennis				
254.	Rackets	Dunlop or Equivalent	2		
255.	Balls	Dunlop, or Equivalent	24		
	Squash				
256.	Squash –	Rackets (Prince / Dunlop) or Equivalent	2		
257.	Squash Ball (blue, Red & yellow single dot)	Dunlop) or Equivalent	2		

Total Amount Rupees (in words)

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6. Bid Evaluation Criteria

S.#	Point of Evaluation	Evaluation Criteria	Remarks	Page No
1.	Technical Specifications:	• Compliance with required specifications for each equipment item • Accuracy, precision, and reliability of measurements • Durability and robustness of the equipment	Must Add Boucher/s with clear indications of parameters given in column 2	
2.	Pricing:	• Competitive pricing of the equipment • Value for money in terms of features and quality	Mention in Items Demand Section	
3.	Warranty and After-sales Support	• Length and coverage of warranty offered by the supplier • Availability and responsiveness of after-sales technical support	Add warranty and after sales technical support certificate on bidder`s letterhead for each item.	
4.	User-Friendliness:	• Ease of operation and user interface of the equipment • Availability of user manuals and documentation, Software	Mention where applicable	
5.	Training and Technical Assistance	• Availability of training programs for users • Provision of technical assistance and training materials	Mention where applicable	
6.	Delivery Schedule:	• Ability to meet the required delivery timeline	Mention on letterhead	

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7. Criterion Formula

Evaluation Criteria	Marks
Technical Specifications	30
Pricing	30
Warranty and After-sales Support	10
User-Friendliness	10
Training and Technical Assistance	10
Delivery Schedule	10

The evaluation criteria outlined above, shall be used as the basis for assessing the bids. The formula which incorporates the assigned marks for each criterion, will be utilized to calculate the total scores for each bid. The formula ensures a comprehensive and objective evaluation process, taking into consideration the relative importance of each criterion as determined by the assigned Marks.

By adhering to this evaluation process, the University aims to facilitate a fair and transparent assessment of the bids, enabling the selection of the most advantageous bid that best meets the requirements and priorities of the procurement project.

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8. TERMS & CONDITIONS

The following terms of the supply are agreed by the manufacturer / supplier / distributor / firms or companies:

(i) **Receiving / Acceptance of Purchase/Work Order:** The manufacturers / supplier / distributor will sign the copy of the Purchase/Work Order as acknowledgement.

(ii) **Delivery Challan:** Copies of Delivery Challan on which the Order number, date of delivery execution, quantity, quality, specs, manufacturer name clearly mentioned. Non-compliance with this condition renders the goods liable to non-acceptance. After seven days, University of Sindh will not be responsible for any claim(s) / responsibility.

(iii) **Place of Delivery:** As specified in the Purchase/Work Order unless otherwise informed accordingly.

(iv) **Delayed Delivery:** 2% liquidated damages of the total amount will be imposed per month for which the company/firm/agency failed to deliver within the delivery/execution period and maximum upto 10%.

(v) **Inspection:** Physical inspection will be carried out by University of Sindh authority. Ordered material is subject to final inspection at the time of delivery.

(vi) **Quantity Delivered:** Competent Authority reserves the right to change/alter/remove any item or article or reduce/enhance quantity without assigning any reason and contractor will abide the instruction.

(vii) **Condition of Goods**: All items must meet in all respects with the specs & conditions of the Order and must be in good condition otherwise they will be liable to reject.

(viii) **Delivery of Goods:** All the items must be delivered to the concerned institute/dept. via office of the Procurement of the University of Sindh who will sign the receipt with stamp on delivery note.

(ix) **Rejection of Goods:** We reserve the right to cancel any or all the items if material is not in accordance with our specification or if the delivery is delayed.

(x) **Sub-letting:** No sub-letting in any case and form will be acceptable.

(xi) **Termination:** That upon termination of this agreement the service provider shall be permitted to remove all its devices and equipment which may have been placed at premises from the time to time.

(xii) **Submission of Invoices:** Invoice / Bill should be submitted to Central Scientific Procurement, University of Sindh, Jamshoro.

(xiii) **Advance Payment:** Advance Payment subject to Bank Guarantee.

(xiv) **Validity of Bid:** Validity is for ninety (90) days.

(xv) **Company Profile:** Company Profile be attached with this document.

(xvi) **Rules, Regulations & Policies:** All rules, regulations and policies will be governed in accordance to the SPPRA.

(xvii) **Price / Rate:** must be quoted on Tender Form only and submitted EPADs /in sealed envelope in PKR.

(xviii) **General Sales Tax:** will be paid on applicable items only by the company/firm/agency.

(xix) **Bid Security:** 3% Bid Security should be deposited along with the tender form in shape of PAY ORDER / DEMAND DRAFT/Bank guarantee only in the name of University of Sindh, Jamshoro.

(xx) **Arbitration:** In case of any dispute, difference or and question which may at any time arise between the parties hereto or any person under them, arising out in respect of this letter of intent or this subject matter thereof shall be referred to the Registrar of the University of Sindh Jamshoro and CEO of the company / firm / agency for arbitration/settling of the dispute, failing which the decision of the court law in the jurisdiction of Jamshoro binding to the parties.

(xxi) **Performance Security:** Successful bidder should provide **5%** Performance Security of total value of Work Order in the form of Pay Order or bank guarantee before submission of invoice. The Performance Security shall extend at least three months beyond the Date of Delivery/Completion of work / Contract / Warranty, whichever is longest.

(xxii) **Government tax(es), levi(es) and charges(s)**: It will be charged at actual as per Govt. of Pakistan.

(xxiii) **Rights:** University of Sindh reserve the right to accept or reject any or all tender(s) or terminate proceedings at any stage in accordance to the rules & regulations framed by SPPRA. University of Sindh, also reserve the right to issue Purchase Order / Work Order for any single items to different lowest responsive bidders or issue Purchase Order / Work Order for all the items to any lowest responsive bidder.

(xxiv) **Tender Document:** Tender Document available at the Office of the **Incharge, Central Scientific Procurement @ Faculty of Engineering & Technology**, University of Sindh, Jamshoro-76080.

(xxv) **Discourage Child Labor:** All staff must have CNIC and clearly mentioned to discourage work through child labor.

(xxvi) **Environmental Friendly Procedure:** Supplier / Manufacturer / Distributor must ensure Environmental Friendly procedure of manufacturing and avoid the use of Toxic material.

(xxvii) **Submission of Tender:** Last date for submission is **25-06-2026 11:00 am**

(xxviii) **Opening of Tender:** Tender will be opened **25-06-2026 11:30 am Office of the Dean, Faculty of Natural Science**, University of Sindh, Jamshoro-76080.

(xxix) **Government tax(es), levi(es) and charges(s)**: All Government taxes (including Income tax and stamp duty), levies and charges will be charged as per applicable rates / denomination of Purchase Order.

(xxix) **Stamp Duty**: **0.35%** against total value of Work Order will be levied accordingly.

(xxx) **Currency:** All currency in the proposal shall be quoted in Pakistan Rupees (PKR).

(xxxi) **Active Tax Payer:** Manufacturers / Firms / Supplier / Companies / Distributors shall maintain its status as an active/filer taxpayer with taxation authorities while rendering services to University of Sindh , Jamshoro .

(xxxii) **Delivery Time**: The items should be delivered within one week from the date of acceptance of Purchase Order.

(xxxiii) **Installation and Demonstration of Equipment Supplies**.

a). Installation

i) After inspection and taking over of the Equipment if required the **Supplier / Contractor shall install** those items of Equipment which are to be permanently positioned in place in the premises of the Central Scientific Procurement / University. For this purpose, the Supplier /

Contractor shall co- ordinate with the Incharge, Central Scientific Procurement, Sindh University, for making arrangements for the Hardware needed for the installation.

ii) The cost of hardware for such installation shall be borne by the Supplier / Contractor as per contract. The Supplier / Contractor shall provide, along with his offer, the details of the hardware needed for each item of the Equipment separately. The technical and other personnel needed for installation of the Equipment shall be provided by the Supplier / Contractor at his cost. The entire cost of installation, configuration, application except that of the needed hardware, shall be borne by the Supplier / Contractor.

b) Demonstration

i) After installation of the Equipment, the complete working of each item of Equipment for the purpose of performing the intended Laboratory experiments, testing of specimens and recording of the test results etc., shall be demonstrated fully to the designated staff of the University by the Supplier / Contractor or his technical personnel.

i) The entire **cost**, including the T.A. / D.A. of the personnel involved in the demonstration, shall be **borne by the Supplier / Contractor**.

c) Completion Certificate

After completion of the installation and demonstration, as stated above, a certificate is to be obtained by the Supplier / Contractor from the concerned Institute/Department stating that the Equipment (item-wise) have been satisfactorily installed and demonstrated by the Supplier / Contractor.

(xxxiv) **Extension of Time**

If the completion of the Contract is delayed due to reason beyond the control of the Supplier / Contractor, the Supplier / Contractor shall without delay request Professor Incharge, Central Scientific Store / University, in writing, of his **claim** for an extension of time. Central Scientific Store / University on receipt of such request may agree to **extend the completion date** as may be reasonable in the circumstances of the case but without prejudice to other terms and conditions of the Contract

(xxxv) **Non-compliance & black listing:** In the event of non-compliance with the terms and conditions stipulated in the bidding document and as described in the Sindh Public Procurement Rules 2010 (amended 2021), appropriate action will be taken in accordance with the provisions outlined in the "Regulations for Blacklisting of Regulations for Blacklisting of Bidder, Contractores, Supplier and Consultants, 2023

Stamp & Signature

Convener Member Member Member Member Member(Ext.) Member

9. Integrity Pact

Declaration of Charges, Fees, Commission, Taxes, Levies etc payable by the manufacturer/supplier/distributor works;

M/s _____, the manufacturers/ companies / distributor / firm hereby declare that:

(a) Its intention not to obtain the procurement work of any Contract, right, interest, privilege, or other obligation or benefit from the University of Sindh or any administrative or financial offices thereof or any other department under the control of the University of Sindh through any corrupt practice(s).

(b) Without limiting the generality of the forgoing the manufacturers / companies / distributor / firm represents and warrants that it has fully declared the charges, fees, commission, taxes, levies etc, paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within the University of Sindh directly or indirectly through any means any commission, gratification, bribe, gifts, kickback whether described as consultation fee or otherwise, with the object of obtaining or including the procurement or service contract or order or other obligations whatsoever from the University of Sindh , except that which has been expressly declared pursuant hereto.

(c) The manufacturers / companies / distributor / firm accepts full responsibility and strict liability for making any false declaration/statement, not making full disclosure, misrepresenting facts or taking any action likely to degrade the purpose of declaration, representation and warranty. It agrees that any contract/order obtained aforesaid shall without prejudice to any other right & remedies available to the University of Sindh under any law, contact, or other instrument, be stand void at the discretion of the University of Sindh .

(d) Notwithstanding any right and remedies exercised by the University of Sindh in this regard, manufacturers / companies / distributor / firm agrees to indemnify the University of Sindh for any loss or damage incurred by it on account of its corrupt business practice & further pay compensation to the University of Sindh in any amount equivalent to the loss of any commission, gratification, bribe, gifts, kickback given by the manufacturers / companies / distributor / firm as aforesaid for the purpose of obtaining or inducing procurement/work/service or other obligation or benefit in whatsoever from the University of Sindh .

Note: This integrity pact is mandatory requirement other than auxiliary services / works.

_____
Stamp & Signature

It is hereby certified that the terms and conditions have been read, agreed upon and signed.

M/s _____

Contact Person_____

Address_____

Tel #_____Fax _____

Mobile_____email_____

_____
SIGNATURE & STAMP

Convener Member Member Member Member Member(Ext.) Member