



**BID EVALUATION REPORT FOR PROCUREMENT OF PHYSICS LAB ITEMS (TENDER NO. 25/2020-21-PROJECT)
(STRENGTHENING OF EXISTING FACILITIES OF GOVT. SADIQ COLLEGE WOMEN UNIVERSITY (GSCWU), BAHAWALPUR)**

- PPRA Reference No: 154928T30042021985
- Date and Time of Bid Closing: 20/05/2021 @ 12:00 P.M.
- Date and Time of Bid Opening: 20/05/2021 @ 12:30 P.M.
- No. of Bids Received: 03 (Three)
- Item: Physics Laboratory Items.

The tendering process was held on 25/05/2021 for Physics Laboratory Items. Three (03) bidders participated in tendering process. The names of the bidders/firms are as under:

1. M/S Wahid Scientific Store
2. M/S Sentron Asia international
3. M/S Pakistan Analytics Supply

The financial bids were opened on 23/09/2021 at 01:30 P.M in the office of the Purchase for the Technically Qualified items by indicating the rates for the Technically Qualified items only (from the Technical and Evaluation committee for Physics Lab items).

Technical Report along with the rates is as under:
(The rates are quoted only for the technically qualified items)

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
1	Acceptor Circuit	Acceptor circuit app (LRC)fitted with components, A.C Micro-ammeter Pak with diagram on box for 220volts	Acceptor circuit app (LRC) fitted with components, A.C Micro ammeter Pak with diagram on box for 220volts Warranty: 1 year Pak Made =4900/-	Acceptor circuit app (LRC) fitted with components, A.C Micro-ammeter Pak with diagram on box for 220volts Pak	1.Wahid Scientific Store 2.Sentron Asia international 3.Pakistan Analytics Supply	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
2.	Ammeter, Voltmeter	Ammeter Dc Moving coil 0-0.6 amp and 0-3 amp dual Range Voltmeter Dc dual range bench type 0-3/0-15volt Make China =742/- Warranty: 1 year Make Pak =2699/-	Not quoted	Ammeter Dc Moving coil 0.6 amp and 0-3 amp dual Range original made china. Voltmeter Dc dual range bench type 0-3 15volt Original made in china. =761/- Made =2516/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
3	Astable Multivibrator Circuit	Astable Multivibrator Circuit Make China =5200/-	Astable Multivibrator Circuit Pak Pak Made =7900/-	Astable Multivibrator Circuit Pak =5148/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
4	Ballistic Galvanometer	Ballistic galvanometer "Edspot" in bakelite case built in scale 150mm into 100 division resistance 100 ohms sensitivity 4 to 5 microamp per 75mm for 220volt Make Pak =11450/-	Not quoted	Ballistic galvanometer "Edspot" in bakelite case built in scale 150mm into 100 division resistance 100 ohms sensitivity 4 to 5 microamp per 75mm for 220volt English type Pakistan. =50895/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
5	Bread Board	Bread Board Make China =495/-	Bread Board (Size : 166 mm X 54 mm China =240/-	Bread Board China =456/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
6	Bridge Rectifier	Half wave and full wave rectifier app. Combined in a box with circuit diagram Make Pak =2445/-	Half wave and full wave rectifier app. Combined in a box with circuit diagram Pak make =5900/-	Half wave and full wave rectifier app. Combined in a box with circuit diagram Pak Made	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	

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Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
7	Burglar Alarm Circuit	Burglar Alarm Circuit Make Pak =990/-	Not quoted	=1076/- Burglar Alarm apparatus small to study logic Ga NAND for Burglar alarm fitted two keys, two resistances buzzer and LED in 7"x5" box with connection and diagram without power supply complete Pak Made =1076/-	Supply 1. Wahid Scientific Store 2. Pakistan Analytics Supply	
8	potentiometer	N/Q	N/Q	Potentiometer 4 wires wood base brass terminal with Jockey superior P =2960/-	1. Pakistan Analytics Supply	
9	Carey Foster Bridge	Carey Foster Bridge 4 gaps brass nickled strips on red wood base brass terminal with jockey Pak Made =1250/-	Not quoted	Carey Foster Bridge 4 gaps brass nickled strips on wood base brass terminal with jockey Make Pak =1229/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
10	Combinational Logic De Multiplexer circuit	Combinational Logic Multiplexer circuit Pak Made =6250/-	Combinational Logic De-Multiplexer circuit Pak Made =24000/-	Combinational Logic De-Multiplexer circuit Make Pak =6084/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
11	Combinational Logic Multiplexer Circuit	Combinational Logic Multiplexer circuit Make Pak =6250/-	Combinational Logic Multiplexer circuit Pak Made =24000/-	Combinational Logic Multiplexer circuit Pak Made =6048/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
12	D latch and Flip Flop Circuit	D latch and Flip Flop Circuit Make Pak =6400/-	Not quoted	D latch and Flip Flop Circuit Pak Made =6306/-	1. Wahid Scientific Store	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
13	D/A Conversion Circuit	D/A Conversion Circuit Make Pak =64000/-	D/A Conversion Circuit Pak Made =32000/-	D/A Conversion Circuit Pak Made =6306/-	2.Pakistan Analytics Supply 1.Wahid Scientific Store 2.Sentron Asia international 3.Pakistan Analytics Supply	
14	Digital Logic Trainer	Digital Logic Trainer Make Pak =28500/-	Not quoted	Digital Logic Trainer Pak Made =27963/-	1.Wahid Scientific Store 2.Pakistan Analytics Supply	
15	Digital Multimeter	DC Voltage Range (600mv- 1000v) DC Current Range (60uA-20A) AC voltage Range (6-650v) AC Current Range (6mA-20A) Capacitance (9.99nF-99.9mF) Resistance (0-60Mohm) Frequency • Continuity , REL ,Data Hold ,LCD Backlight • Low Battery Indication • Auto Power Off Around 15 minutes Make China =7420/-	Model: UT55 DC Voltage (V): 200mV/2V/20V/200V/1000V ±(0.5%+1) DC Current (A): 2mA/20mA/200mA/20A ±(0.8%+1) AC Voltage (V): 2V/20V/200V/750V ±(0.8%+3) AC Current (A): 20mA/200mA/20A ±(1%+3) Resistance (Ω): 2KHz/20KHz ±(1.5%+5) Temperature (°C): -20 Hong Kong =7500/-	DC Voltage Range (600mv- 1000v), DC Current Range (60uA-20A) AC voltage Range (6-650v), AC Current Range (6mA-20A) Capacitance (9.99nF-99.9mF) Resistance (0-60Mohm) Frequency • Continuity • REL • Data Hold • LCD Backlight • Low Battery Indication • Auto Power Off Around 15 minutes Model UT-51 UNI-T	1.Wahid Scientific Store 2.Sentron Asia international 3.Pakistan Analytics Supply	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
16	Digital Oscilloscope	25 MHz bandwidth selections 2ch input 250MS/s maximum samplin rate 10M maximum memory depth for each channel 7" 800 x 480 WVGA LCD display 256 color gradient display function to strengthen waveform performance 1Mpts FFT frequency Make China =64500/-	Bandwidth 25MHz Channels 2 Sampling rate 250MS/s Rise time 2, 000wfms/s Vertical scale (V/div) 1mV/div~20V/div Time base scale (s/div) 10ns/div~50s/div Storage methods Setup, waveform, bitmap Hongkong =44000/-	25 MHz band width selections, 2ch input • 250MS/s maximum sampling rate • 10M maximum mem depth for each channel • 7" 800 x 480 WVGA LCD display • 256 colour gradient display function to strengthen waveform performance Model UTD-2025CL UNI-T China =48204/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
17	Drawer Boxes for Electronic Components	Drawer Boxes For Electronic Components Make Pak =18500/-	Not quoted	Drawer Boxes for Electronic Components Pak Made =7898/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
18	Four Digit Decade Counter Circuit	Four Digit Decade Counter Make Pak =6400/-	Not quoted	Four Digit Decade Counter Circuit Pak Made =5850/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
19	IC's For Logic Gates	IC's For Logic Gates Make Pak =5800/-	Not quoted	IC's For Logic Gates Pak Made =995/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
20	Ionization potential of mercury	Ionization potential of mercury apparatus complete with	Ionization potential of mercury apparatus complete with mercury tube built in	Ionization potential of mercury app. complete with Mercury tube built in	1. Wahid Scientific Store 2. Sentron Asia	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
21	apparatus	mercury tube built in power supply fitted voltmeter and microammeter for 220volts complete apparatus Make Pak =23400/-	power supply fitted voltmeter and micrometer for 220 volts complete apparatus Pak Made =84000/-	in power supply fitted voltmeter and microammeter for 220volts complete apparatus. Pak Made =55575/-	international 3. Pakistan Analytics Supply	
	J-K Flip Flop Circuit	J-K Flip Flop Circuit Make Pak =6400/-	Not quoted	J-K Flip Flop Circuit Make Pak =5850/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
22	LDR Not Gate Circuit	LDR Not Gate Circuit Make Pak =6400/-	Not quoted	LDR Not Gate Circuit Make Pak =5850/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
23	Logic Probe	Logic Probe Make Pak =6400/-	Not quoted	Logic Probe Make Pak =5223/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
24	MSI Adder Circuit	MSI Adder Circuit Make Pak =6400/-	Not quoted	MSI Adder Circuit Make Pak =5223/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
25	Mutual Inductance Circuit	Mutual Inductance Circuit Make Pak =7200/-	Not quoted	Mutual Inductance Circuit Make Pak =5223/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
26	One Shot Multivibrator circuit	One Shot Multivibrator circuit Make China =7200/-	Not quoted	One Shot Multivibrator circuit Make China =5223/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
27	Power Supply	"Specification:• 3	Not quoted	Specification:•	1. Wahid Scientific	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
		Independent Isolated outputs, 0-30V, 0-5A (X2), Four 3-Digits LED Displays, Over Load and Reverse Polarity Protection, Mode Digital meter: 3 Digits 0.5" LED Display Make "China" =19800/-		<ul style="list-style-type: none"> 3 Independent Isolated outputs, 0-30V, 0-5A (X2), Four 3-Digits LED Displays, Over Load and Reverse Polarity Protection, Tracking Operation and Auto Series/Parallel Operation Linear / Switching Mode: Linear Mode Digital meter: 3 Digits 0.5" LED Display: China =18427/-	Store 2. Pakistan Analytics Supply	
28	Rejecter Circuit	Rejecter circuit app fitted with components, AC Microammeter and Circuit diagram on box for 220Volts Make Pak =2750/-	Rejecter circuit app fitted with components, AC Microammeter and Circuit diagram on box for 220Volts Pak Made =4900/-	Rejecter circuit app fitted with components, AC Microammeter and Circuit diagram on box for 220Volts. =2515/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytics Supply	
29	Self-Inductance Circuit	Self-Inductance Circuit Make Pak =7200/-	Not quoted	Self-Inductance Coil on wooden box. =21645/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
30	Shift Register Counter Circuit	Shift Register Counter Circuit Make Pak =6200/-	Not quoted	Shift Register Counter Circuit Pak =5206/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
31	Signal Generator	Analog Channel: 1* Frequency Range: 0.1Hz ~12MHz* Sample Rate: 20 MSa/s* Vertical	Signal Generator Dual Channel DDS Function arbitrary waveform signal generator pulse signal source frequency	Audio Generator wide frequency ranges from 10Hz-1MHz	1. Wahid Scientific Store 2. Sentron Asia international	Pakistan analytical supply is disqualified

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
32	Synchronous Counter Circuit	Synchronous Counter Circuit Make China =8200/-	Not quoted	Synchronous Counter Circuit Pak Made =7956/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	due to difference in frequency range and model is not mentioned.
33	Thermistors and LDRs(Variety of NTC, PTC and LDR)	Thermistors and LDRs (Variety of NTC, PTC and LDR) Make China =4200/-	Not quoted	Thermistors and LDR, Variety of NTC, PTC and LDR) Pak Made, Pak Made =4095/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
34	Transistor oscillators Circuit	Transistor as oscillator app. with circuit diagram in box Make China =1450/-	Not quoted	Transistor as oscillator app. with circuit diagram in box Pak Made =1443/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
35	Triac Circuit	Triac Circuit Make China =8500/-	Not quoted	Triac Circuit Pak Made =5089/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
36	Two Digit Up	Two Digit Up Down	Not quoted	Two Digit Up Down	1. Wahid Scientific	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
37	Variety of Capacitors	(15 Packets of Different value of Standard Capacitor) Make China =325/-	Not quoted	Variety of Capacitors (15 Packets of Different value of Standard Capacitor) China =287/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
38	Variety of different Transistor and general-purpose Ics	(10 Packets of Different Transistor and Ics) Make China =850/-	Not quoted	Variety of different Transistor and general-purpose Ics (10 Packets of Different Transistor and Ics) China =878/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
39	Variety of Inductors	(10 Packets of Different value of Standard Inductors) Make Pak =9800/-	Not quoted	Variety of Inductors (10 Packets of Different value of Standard Inductors) China =11115/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
40	Variety of Resistors	50 Packets of different value of Standard Resistor) Make Pak =950/-	Not quoted	Variety of Resistors (50 Packets of different value of Standard Resistor) China =293/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
41	Variety of Si, Ge, Zener and LED Diode	(Different color LEDs and Strips of General Purpose Diodes) Make Pak =24/-	Not quoted	Variety of Si, Ge, Zener and LED Diode China =410/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
42	Galvanometer	Galvanometer dual range (30-0-30) bench type original Make Pak =821/-	Not quoted	Galvanometer dual range (30-0-30) bench type original Made in china. =1112/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
43	Geiger-Muller Counter Apparatus	Operated on high voltage 200to 500Volts variable for GM counting continuously working. The count rate is 0-9999 counts per second. Complete with GM tube MX-168 (ZP-1481) with holder and cable connected through bnc connector. Above systems essentially required the following accessories: Absorber Set of 24 pieces, 1 tissu paper, in plastic, 16 Aluminium pieces 4-890mg, 07-7.6cm. 07 lead pieces 18-Make Pak =585,000/-	Geiger-Muller Counter Apparatus Model : XKS-302-010F Operated on high voltage 200 to 500Volts variable for GM counting continuously working. The count rate is 0-9999 counts per second. Complete with GM tube MX- 168 (ZP-1481) with cable connected through BNC connector Made : Griffen & George England =800,000/-	G.M. tube with Holder & Lead IPC Made in England with Timer Scaler and Frequency Meter digital microprocessor controlled Multipurpose Instrument for Physics Laboratory combining the Functions of Ratemeter, Frequency Meter and a timer built in EHT supply continuously variable over the range 300 to 500 volts Cat No IPC-3342-T IPC Made in England.	1. Wahid Scientific Store 2. Sentron Asia international	Pakistan Analytical supply is disqualified due to difference in voltage range. That is 300-500 Volts
44	Dielectric constant measuring apparatus R.F. Generator (Range : 9-10MHz apprx.). Micro ammeter (Range : 0-50m A). High	Not Quoted	Brass parallel plates size 25cmx25cm 2nos Inductance mounted in box. 735mH 1No. Plastic plate 1"x1" 1No. Spacers set 1No. AC meter 0-20mA bench type 1No. Connecting wire pair 1/2meter with crocodile 4Nos. Wooden support 1No. Glass Plate 10"x10" Pak Audio Generator (China) wide frequency ranges from 10Hz- 1MHz operated on 220volts Pak Made	Dielectric constant measuring apparatus R.F. Generator (Range: 9-10MHz approx.). Micro ammeter (Range: 0-50m A). High 1. Aluminium parallel plates size 25cmx25cm 2nos 2. Inductance mounted in box. 735mH 1No. 3. Plastic plate 1"x1" 1No. 4. Spacers set 1No. 5. AC meter 0-20mA bench type china 1No. 6. Connecting wire pair 1/2meter with crocodile 4Nos.	1. Pakistan Analytics Supply	Sentron Asia international is disqualified due to Brass plates quoted. Required plates are of Aluminium plates.

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
45	Speed of light apparatus using laser and mirror with u/s scope	Not quoted	To determine the speed of light in air. Through reflecting mirror, In mount case and convex lens $f=50\text{mm}$ Laser module split the beam through splitter in two direction. 25MHZ Made : Sargent Welch USA $\approx 380,000/-$	Not quoted 7. Wooden support 1No. 8. Glass Plate $10^{\circ} \times 10^{\circ}$ Pak 9. Audio Generator wide frequency ranges from 10Hz- 1MHZ Operated on 220volts Made in Pak $\approx 198900/-$	1. Sentron Asia international	Sentron Asia international is disqualified Due to difference in resistance vale as Mirrors $R1 = \infty$, $R = 1\text{ m}$ which not according to the required and given specification (resistor value 100ohm, 100ohm -1kohm, and 10kohm 100kohm)
46	Laser Study Experiment	Not quoted	He-Ne Laser Experiment HE-NE Laser with Brewster window Mirrors $R1 = \infty$, $R = 1\text{ m}$ Laser tube Length 270 mm Center Wavelength 632.8 nm Output Power $\leq 1.5\text{ mW}$ Confocal Spherical Scanning Interferometer Cavity Length 20.56 mm Radius of Curvature of Concave Mirror 20.56 mm Reflectivity of Concave Mirror 99% Finesse > 100 Made : Lambda Sci USA	Not quoted		

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Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
47	Millikan-oil drop apparatus (Complete)	<p>Technical Specification:- Rated voltage: AC220V - Rated frequency: 50Hz - Rated output power: 5W - DC operating voltage between upper And lower polar plates: 0 ~ 450V - Distance between polar plates: 5±0.2mm - Total magnification of measuring Microscope: 30X - Linear field of vision: ≥3mm - Total division of division scale: 2±0.01mm - Resolution of objective lens: 100 lines / mm Make Pak =155000/-</p>	<p>Technical Specification:- Rated voltage: AC220V Rated frequency: 50Hz Rated output power: 5W DC operating voltage between upper And lower polar plates: 0 ~ 450V Distance between polar plates: 5±0.2mm Total magnification of measuring Microscope: 30X Linear field of vision: ≥3mm Total division of division scale: 2±0.01mm Resolution of objective lens: 100 lines / mm China =74000/-</p>	<p>Technical Specification:- Rated voltage: AC220V - Rated frequency: 50Hz - Rated output power: 5W - DC operating voltage between upper And lower polar plates: 0 ~ 450V - Distance between polar plates: 5±0.2mm - Total magnification of measuring Microscope: 30X - Linear field of vision: ≥3mm - Total division of division scale: 2±0.01mm - Resolution of objective lens: 100 lines / mm Complete unit, Made in China. =150930/-</p>	<p>1. Wahid Scientific Store 2. Sentron Asia International 3. Pakistan Analytics Supply</p>	
48	E/M measurement of Electron Apparatus	<p>Acceleration electrode voltage: 0-250V continuously adjustable Error of the voltmeter on panel ≤0.25% Magnetizing current: 0-0.25A continuously adjustable Error of the ammeter on panel ≤0.25% Current range 0-0.25A continuously adjustable Error of the ammeter on panel ≤0.25% Clockwise, off, anticlockwise direction 3 ways Deflection plate voltage: Voltage range 50V ~ 250V Continuously adjustable</p>	<p>Acceleration electrode voltage: 0-250V continuously adjustable Error of the voltmeter on panel ≤0.25% Magnetizing current: 0-0.25A continuously adjustable Error of the ammeter on panel ≤0.25% Current range 0-0.25A continuously adjustable Error of the ammeter on panel ≤0.25% Clockwise, off, anticlockwise direction 3 ways Deflection plate voltage: Voltage range 50V ~ 250V Continuously adjustable</p>	<p><u>E/M/Lorentz Force apparatus</u> The Lorentz force demonstrator is useful for testing the Electron charge mass ratio. The Lorentz force exerted by magnetic field on moving electrons and deflection of moving Electrons within an electric field. Technical Specification.</p>	<p>1. Wahid Scientific Store 2. Sentron Asia International 3. Pakistan analytical supply</p>	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytices Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
49	Neon Flash bulb and Condenser	Neon lamp app in box built in Mega ohms resistance 10 valves and capacitors etc. For 220 volts with circuit diagram complete in all respects Make Pak =1490/-	Neon lamp app in box built in Mega ohms resistance 10 valves and capacitors etc for 220 volts with circuit diagram complete in all respects Pak Made =3800/-	Neon lamp app. in box built in Mega ohms resistance 10 valves and capacitors etc. for 220volts with circuit diagram complete in all respects Pak Made =2048/-	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytices Supply	
50	BH Curve Measurement circuit	To study BH, Permeability Hysteresis Curve: Magnatic field, flux & ,induction. Including U&I Core Coil 300turn, Data logger, Voltage & Current sensor, power supply & Software Complete apparatus (But with Computer / Make Pak =21450/-	To study BH, Permeability Hysteresis Curve: Magnatic field, flux & ,induction. Including U&I Core Coil 300turn, Data logger , Voltage & Current sensor, power supply & Software (Designed Software By Indosaw) Complete apparatus (But with Computer Core i-3 Made : Sargent Welch USA	B-H Curve Apparatus for Degree Classes complete iron ring Toroid Coil and Power Supply etc Pak Made With Oscilloscope China	1. Wahid Scientific Store 2. Sentron Asia international 3. Pakistan Analytices Supply	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
51	Solar cell characteristics apparatus	Not quoted	Solar cell characteristics apparatus combined Made : IOCAL Made =120000/-	Solar cell characteristics apparatus Combined Pak Made =24,921/-	1. Wahid Scientific Store 2. Sentron Asia International 3. Pakistan Analytics Supply	
52	Hall effect apparatus	Range : 0 -2 Kilo Gauss at 0 -20 Kilo Gauss. Resolution : 1, Gauss at 0 -2 Kilo Gauss Range. Accuracy : 0.5%. Display : 3 1/2 Digit. 7 segment LED DPM. Power : 220 Volt, 10%. 50 Hz. Transducer : Hall Probe with an imported Hall Element. Make Pak =84000/-	Specifications: Outputs for equivalent voltages: 4-mm safety sockets 8-pin miniDIN sockets (3BNETlog compatible) Power supply: 12 V AC, 3 A via 4-mm sockets Dimensions: 180x110x50 mm ³ approx. Weight: 0.5 kg approx. Made : 3B Germany =1250000/-	Dc stabilized current supply: Range 0-500mA Digital display resolution 1mA -Four-half-bit digital voltmeter: Range 0-2V, resolution 0.1mV -Digital tesla meter: Range 0-0, 35T, resolution 0.0001 Complete unit as above. Made in China. =438,750/-	1. Wahid Scientific Store 2. Pakistan Analytics Supply	
53	Ionization potential of mercury apparatus	Ionization potential of mercury app. complete with mercury tube built in power supply fitted voltmeter and micro ammeter for 220volts complete apparatus Make Pak =28500/-	Not quoted	Ionization potential of mercury app. complete with Mercury tube built in power supply fitted voltmeter and microammeter for 220volts complete apparatus. Pak Made =5575/-		
54	Reflection, Transmission and Refraction of Microwaves	Not Quoted	Not quoted	Not quoted		Re-tender of equipment is recommended

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
55	Hot plates with magnetic stirrer magnetic bar=1 weight balance = 1, Iron Nitrate (Hydrated), Rare earth (Nd, Ho, Dy, Er)= 20 gram	1. Magnetic bar 2. weight balance Electronics analytical balance Digital microprocessor controlled. Technical specification: Weight capacity: 220gm Minimum display: 0.1mg Pan size(mm): Ø91 approx Chemicals (Sigma Aldrich , 99.99%)= 25 gram each 1. Iron nitrate nano hydrate Fe(NO ₃) ₃ .9H ₂ O Dysprosium nitrate hexa hydrate N ₃ DyO ₉ .6H ₂ O ₃ . Ho(NO ₃) ₃ .5H ₂ O Erbium tri nitrate penta hydrate Er(NO ₃) ₂ .5H ₂ O Make China =172000/-	Not quoted	Magnetic Stirrer With Ceramic Type Hotplate (Digital) Economical Heat only, stir only or heat and stir together functions Easy to read LED display, with independent heat and stir display Electronic speed control for constant speed even during changes in load Hot warning sign if temperature Technical specification Temp range: 25 - 280°C Speed range: 100-1500rpm Temp increment: 1°C Stirring capacity: 3L Plate diameter: 5.3" With PT1000 Sensor & PT1000 Sensor Support Stand & Clamp Model MS-H 280 DLab, USA Country of Origin: China b. Magnetic bar 25mm Chinac Electronic Analytical Balance with Latest UniBlock Technology and digital display. UniBlock designs permits a consistency of production that assures reliability & long operational Automated calibration can be started by pressing keys. UniBlock designs replaces 70 parts of Electromagnetic balances and ensures stable results	1. Wahid Scientific Store 2. Pakistan Analytics Supply	

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytical Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
56	Magnetic stirrer	Digital Microprocessor PID Control. Temp range: Ambient - 550°C. Speed range: 100 - 1500rpm. Temp accuracy at plate: ±1 at 100C. Temp control: accuracy of liquid using PT- 1000 Sensor ±0.2°C. Temp increments: 1°C.	Not quoted	<p>Magnetic Stirrer With Ceramic Type Hotplate (Digital) Economical</p> <p>Features: Heat only, stir only or heat and stir together functions Easy to read LED display, with independent heat and stir display Electronic speed control</p>	I. Wahid Scientific Store	Pakistan Analytical Supply disqualified due to temperature range Because the quoted temperature range is 280°C

B

Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
57	Temperature dependent IV measuring apparatus	Not quoted	Not quoted	Not quoted	NA	
58	Dielectric measuring instrument Frequency Range 1MHz-50 GZ	<p>Multistep and Sweep mode Including FX000C19 Text Fixture. Model: 6632-5G Features: >Frequency range: DC, 10Hz-5MHz resistance 25Ω/100Ω, switchable Make TAIWAN</p>	Not quoted	Not quoted		<p>Disqualified Wahid Scientific Store because the required apparatus must operate in 1MHz-50 GZ</p>
59	Megnetron Sputtering Unit	<p>Features ✓ Semi/fully-automatic control ✓ Low voltage sputtering ✓ High resolution fine</p>	Not quoted	Not quoted		<p>Disqualified Wahid Scientific Store due to specifications</p>

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Sr #	Name of item	Wahid Scientific Store (Rate Per Unit)	Sentron Asia International (Rate Per Unit)	Pakistan Analytics Supply (Rate Per Unit)	Technically Qualified	Technically Disqualified
60	Microscope, Field Emission Pro (FESEM)	Not quoted <ul style="list-style-type: none"> ✓ coating (order of 2nm Gold grain) ✓ 170 mm diameter Borosilicate chamber ✓ 0-100 mA switching power supply ✓ Quartz crystal thickness monitor with precision of 1nm ✓ Film thickness monitor ✓ Electrical control shutter ✓ Automatic venting valve ✓ Sample tilt with rotation ✓ Planetary sample rotation (optional) ✓ Thermocouple vacuum gauge ✓ Make Coat UK (2 Year Warranty) 	Not quoted	Not quoted		such as Stainless steel chamber -400 mm diameter, 2° substrate diameter with rotation, up to 4 x2 sputtering sources, dc pulse source power supply, turbo pumping pressure control are not included in quotation.
						Re-tender of equipment is recommended

Report (Financial) is as under:

Sr. No.	Name of the Firm	Item Name	Lowest Evaluated Rate (Rs.) (P.U. Rate)	Rqd. Qty.	Total Price (Rs.)	Status
1	Pakistan Analytics Supply	Acceptor Circuit	2516	06	15,096	To be purchased
2.	Wahid Scientific Store	Ammeter, Voltmeter	742	15	11,130	To be purchased
3	Pakistan Analytics Supply	Astable Multi vibrator Circuit	5148	05	25,740	To be purchased
4	Wahid Scientific Store	Ballistic Galvanometer	11450	03	34,350	To be purchased
5	Sentron Asia International	Bread Board	240	50	12,000	To be purchased

Sr. No.	Name of the Firm	Item Name	Lowest Evaluated Rate (Rs.) (P.U. Rate)	Rqd. Qty.	Total Price (Rs.)	Status
6	Pakistan Analytics Supply	Bridge Rectifier	1076	05	5,380	To be purchased
7	Wahid Scientific Store	Burglar Alarm Circuit	990	05	4,950	To be purchased
8	Pakistan Analytics Supply	potentiometer	2960	05	14,800	To be purchased
9	Pakistan Analytics Supply	Carey Foster Bridge	1229	05	6,145	To be purchased
10	Pakistan Analytics Supply	Combinational Logic De Multiplexer circuit	6084	05	30,420	To be purchased
11	Pakistan Analytics Supply	Combinational Logic Multiplexer Circuit	6048	03	18,144	To be purchased
12	Pakistan Analytics Supply	D latch and Flip Flop Circuit	6306	03	18,918	To be purchased
13	Pakistan Analytics Supply	D/A Conversion Circuit	6306	03	18,918	To be purchased
14	Pakistan Analytics Supply	Digital Logic Trainer	27963	05	139,815	To be purchased
15	Pakistan Analytics Supply	Digital Multimeter	6026	05	30,130	To be purchased
16	Sentron Asia International	Digital Oscilloscope	44000	06	264,000	To be purchased
17	Pakistan Analytics Supply	Drawer Boxes for Electronic Components	7898	05	39,490	Item withdrawn
18	Pakistan Analytics Supply	Four Digit Decade Counter Circuit	5850	05	29,250	To be purchased
19	Pakistan Analytics Supply	IC's For Logic Gates	995	30	29,850	To be purchased
20	Wahid Scientific Store	Ionization potential of mercury apparatus	23400	02	46,800	To be purchased
21	Pakistan Analytics Supply	J-K Flip Flop Circuit	5850	05	29,250	To be purchased

Sr. No.	Name of the Firm	Item Name	Lowest Evaluated Rate (Rs.) (P.U. Rate)	Rqd. Qty.	Total Price (Rs.)	Status
22	Pakistan Analytics Supply	LDR Not Gate Circuit	5850	05	29,250	To be purchased
23	Pakistan Analytics Supply	Logic Probe	5223	05	26,115	To be purchased
24	Pakistan Analytics Supply	MSI Adder Circuit	5223	05	26,115	To be purchased
25	Pakistan Analytics Supply	Mutual Inductance Circuit	5223	05	26,115	To be purchased
26	Pakistan Analytics Supply	One Shot Multivibrator circuit	5223	05	26,115	To be purchased
27	Pakistan Analytics Supply	Power Supply	18427	08	147,416	To be purchased
28	Pakistan Analytics Supply	Rejecter Circuit	2515	06	15,090	To be purchased
29	Wahid Scientific Store	Self-Inductance Circuit	7200	03	21,600	To be purchased
30	Pakistan Analytics Supply	Shift Register Counter Circuit	5206	05	26,030	To be purchased
31	Sentron Asia International	Signal Generator	42900	10	429,000	To be purchased
32	Pakistan Analytics Supply	Synchronous Counter Circuit	7956	05	39,780	To be purchased
33	Pakistan Analytics Supply	Thermistors and LDRs(Variety of NTC, PTC and LDR)	4095	10	40,950	To be purchased
34	Pakistan Analytics Supply	Transistor oscillators Circuit	1443	05	7,215	To be purchased
35	Pakistan Analytics Supply	Triac Circuit	5089	05	25,445	To be purchased
36	Pakistan Analytics Supply	Two Digit Up Down Counter	5089	05	25,445	To be purchased
37	Pakistan Analytics Supply	Variety of Capacitors	287	15	4,305	To be purchased
38	Wahid Scientific Store	Variety of different Transistor and general-purpose lcs	850	10	8,500	To be purchased

Sr. No.	Name of the Firm	Item Name	Lowest Evaluated Rate (Rs.) (P.U. Rate)	Rqd. Qty.	Total Price (Rs.)	Status
39	Wahid Scientific Store	Variety of Inductors	9800	08	78,400	To be purchased
40	Pakistan Analytics Supply	Variety of Resistors	293	50	14,650	To be purchased
41	Wahid Scientific Store	Variety of Si, Ge, Zener and LED Diode	24	100	2,400	To be purchased
42	Wahid Scientific Store	Galvanometer	821	06	4,926	To be purchased
43	Wahid Scientific Store	Geiger-Muller Counter Apparatus	585000	01	585,000	To be purchased
44	Pakistan Analytics Supply	Dielectric constant measuring apparatus R.F. Generator (Range : 9-10MHz apprx.). Micro ammeter (Range : 0-50mA).High	198900	01	198,900	To be purchased
45	Sentron Asia International	Speed of light apparatus using laser and mirror with u/s scope	380,000	01	380,000	To be purchased
46	---	Laser Study Experiment	---	---	---	---
47	Sentron Asia International	Millikan-oil drop apparatus (Complete)	74000	01	74,000	To be purchased
48	Wahid Scientific Store	E/M measurement of Electron Apparatus	72500	01	72,500	To be purchased
49	Wahid Scientific Store	Neon Flash bulb and Condenser	1490	05	7,450	To be purchased
50	Wahid Scientific Store	BH Curve Measurement circuit	21450	01	21,450	To be purchased
51	Pakistan Analytics Supply	Solar cell characteristics apparatus	24921	02	49,842	To be purchased
52	Wahid Scientific Store	Hall effect apparatus	84000	01	84,000	To be purchased
53	Wahid Scientific Store	Ionization potential of mercury apparatus	28500	01	28,500	To be purchased
54	---	Reflection, Transmission and Refraction of Microwaves Polarization of Microwaves	---	---	---	---

Sr. No.	Name of the Firm	Item Name	Lowest Evaluated Rate (Rs.) (P.U. Rate)	Rqrd. Qty.	Total Price (Rs.)	Status
55	Wahid Scientific Store	Propagation of Microwaves(Inverse Square Law Hot plates with magnetic stirrer magnetic bar=1 weight balance = 1, Iron Nitrate (Hydrated), Rare earth (Nd, Ho,Dy,Er)= 20 gram Magnetic stirrer	172000	01	516,000	To be purchased
56	Wahid Scientific Store		109000	03	327,000	To be purchased
GRAND TOTAL						
					=3,810,590/-	

Sr. No.	Name of Firm	Physics Lab Equipment Items Annexure Nos.	Total Price
1	M/S Wahid Scientific Store	2,4,7,20,29,38,39,41,42,43,48,49,50,52,53,55,56	=1,510,956/-
2	M/S Pakistan Supply	1,3,6,8,9,10,11,12,13,14,15,18,19,21,22,23,24,25, 26,27,28,30,32,33,34,35,36,37,40,44,51	=1,140,634/-
3	M/S Sentron Asia Int.	5,16,31,45,47	=1,159,000/-
GRAND TOTAL			=3,810,590/-

Treasurer

[Signature]
25/07/21