

**VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY:  
BURLA**



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No: VSSUT/ETC/22757 /2024

Date: 07/10/2024

**TENDER CALL NOTICE**

Sealed Bids (properly stitched separately) in two separate covers (Technical Bid and Price Bid) are invited by the “The Registrar, Veer Surendra Sai University of Technology, Odisha” from intending reputed, registered and experienced firms for Supply, Installation, Commissioning and Maintenance of equipments for the procurement of different Items/Equipments related to “Basic Electronics Lab” at Department of Electronics and Telecommunication Engineering (ETC), VSSUT Burla, Odisha. The sealed quotations shall reach the undersigned by regd. / speed post within the office hour by 4.00 P.M. of date 08.11.2024. Tender received beyond this date & time is shall be rejected. “Tender for Electronics and Telecommunication Engineering Dept. for supply of Equipment(s)” must be superscribed on the sealed envelope. The details of the Items/Equipments and their technical specifications are mentioned as below.

**Details of the Items/Equipments**

Sl.No	Name of the Equipments	Specifications	Quantity (No. of units)
1.	Diode characteristic trainer kit.	<ul style="list-style-type: none"> <li>• Study of V-I Characteristics of                             <ol style="list-style-type: none"> <li>1. PN Junction in Forward Bias.</li> <li>2. Zener Diode in Forward Bias.</li> <li>3. PN Junction in Reverse Bias.</li> <li>4. Zener Diode in Reverse Bias.</li> </ol> </li> <li>• <u>Measuring Meters:</u> <ul style="list-style-type: none"> <li>• Ammeter 15mA/150uA DC.</li> <li>• Voltmeter 3V/30V DC.</li> </ul> </li> <li>• <u>Power Supplies:</u> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-3/30V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> </li> <li>• <u>Components are mounted on the panels are:</u> <ul style="list-style-type: none"> <li>• Silicon Diode (1N4007)</li> <li>• Germanium Diode (OA79)</li> <li>• Two Different Voltages Zener Diodes.</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> </ul> </li> </ul> <p>The trainer is housed in ABS Plastic cabinet</p>	05




2	Bread board trainer (ADT)	<p>Size of the trainer set 10"x8" ANALOG AND DIGITAL BREAD BOARD TRAINER (ADT)</p> <ul style="list-style-type: none"> <li>• Study and Construction of Various Analog and Digital Electronics Lab Experiment</li> <li>• <u>Power Supplies:</u></li> <li>• DC Power Supply IC Regulated +5V, ±12V @ 250mA.</li> <li>• DC Power Supply IC Regulated 0 to 15V @ 250mA</li> <li>• AC Power Supply 15-0-15VAC</li> <li>• Operated On Mains Power 230v, 50hz ±10%</li> <li>• Solder-less, breadboard (Easy to remove): Interconnected with tie points Nickel plated contact, fitted with all DIP sizes and all components with lead and solid wire. It can be changed and replaced for different purposes and can be connected with demonstration panel.</li> <li>• Logic Inputs &amp; Outputs 8 Bit</li> <li>• One Clock Generator 10Hz Variable.</li> <li>• One Mono Pulsar</li> <li>• One Logic Probe</li> <li>• One Variable Resistors are given on Board.</li> <li>• Front Panel Built With High Class Insulated Printed Circuit Board Sheet With Well Printed Circuits And Symbols.</li> <li>• Fuse For Short Circuit Protection</li> <li>• Instruction Manual.</li> <li>• Connections are brought out through 2mm Brass Sockets.</li> <li>• Patch Cords 2mm with Bread Board Pin</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 12"x8"</li> </ul>	05
3	MOSFET characteristic trainer kit.	<ul style="list-style-type: none"> <li>• Study of V-I Characteristics of MOSFET</li> </ul> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Voltmeter 5V DC.</li> <li>• Ammeter 30mA DC.</li> <li>• Voltmeter 30V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-5V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-30V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz ±10%</li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• MOSFET IRF540</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> </ul>	05




		<ul style="list-style-type: none"> <li>• Size of the trainer set 12"x8"</li> </ul>	
4	JFET characteristic trainer kit.	<ul style="list-style-type: none"> <li>• Study of V-I Characteristics of JFET</li> </ul> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Volt meter 3V DC.</li> <li>• Ammeter 20mA DC.</li> <li>• Voltmeter 15V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-3V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-15V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• FET BFW10</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 12"x8"</li> </ul>	05
5	PNP/NPN Transistor Trainer kit (CE, CB, and CC).	<ul style="list-style-type: none"> <li>• Study of Common Base Common Emitter and Common Collector</li> </ul> <ol style="list-style-type: none"> <li>1. Input Characteristics of NPN Transistor</li> <li>2. Output Characteristics of NPN Transistor</li> <li>3. Input Characteristics of PNP Transistor</li> <li>4. Output Characteristics of PNP Transistor</li> </ol> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Ammeter 50mA DC.</li> <li>• Ammeter 250uA/50mA DC.</li> <li>• Voltmeter 10V DC.</li> <li>• Voltmeter 1V/10V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-1/10V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-10V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• NPN Transistor SL100</li> <li>• PNP Transistor SK100</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> </ul>	05

		<ul style="list-style-type: none"> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 15"x8"</li> </ul>	
6	<b>OP-AMP Trainer kit for Inverting and Non-Inverting Experiment.</b>	<ul style="list-style-type: none"> <li>• Study of Inverting and Non Inverting Amplifier using Op-amp</li> <li>• <u>Power Supplies:</u></li> <li>• Dual DC Power Supply IC Regulated <math>\pm 15V</math> DC, 150mA.</li> <li>• DC Power Supply IC Regulated 0-12V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Digital Meter:</u></p> <ul style="list-style-type: none"> <li>• Voltmeter 20V</li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• 741 IC (Op-amp)</li> <li>• Resistors</li> <li>• Capacitors</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 12"x8"</li> </ul>	05
7	<b>IC Tester</b>	<p>UICT is a Table-Top version, designed as a powerful tool for manufacturers, servicing engineers, R&amp;D personnel to test a wide range of IC's of Digital, Analog, Digital and Analog IC tester up 20 pins like 14,16,18,20 pin (DIP) dual inline,</p> <p>SUPPLY VOLTAGE: 230V 50Hz AC<math>\pm 10\%</math> 5A.</p> <p>TEST RANGE: Logical gates, counters, flip-flop, buffer, latches, shift registers, encoders, decoders, monostable multivibrator, multiplexer, cross point switches.</p> <ul style="list-style-type: none"> <li>• One mode to test the ICs. Low duration of testing. Analog ICs up to 20 pins in DIP package.</li> </ul>	01
8	<b>Diode rectifier trainer kit for half wave, full wave &amp; bridge rectifier.</b>	<p>Study of</p> <ul style="list-style-type: none"> <li>• Half Wave Rectifier Circuit</li> <li>• Full Wave Rectifier Circuit</li> <li>• Bridge Rectifier Circuit</li> <li>• Filter Circuit</li> <li>• Ripple Factor of an Ac Circuit</li> </ul>	05

Analog Meters:

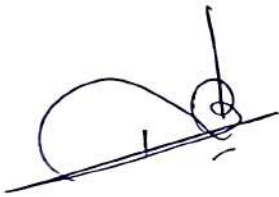
- Voltmeter 30V AC.
- Ammeter 250mA DC.
- Voltmeter 30V DC.

Power Supplies:

- AC Isolated Power Supply 12-0-12 VAC, 150mA.
- Operated on Mains power 230V, 50Hz  $\pm 10\%$

Components are mounted on the panels are:

- Diode 1N4007
- Capacitors 1000 $\mu$ F and 100 $\mu$ F Controlled By Switches.
- Inductor 200mH
- Load Resistor through Rotary Switch
- Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.
- Fuse for Short Circuit protection
- Instruction manual.
- Connections are brought out through 4mm Colored Sockets.
- Patch Cords 4mm.
- The trainer is housed in ABS Plastic cabinet.
- Size of the trainer set 15"x10"



9	<b>Transistor Power Supply (TPS)/DC power Supply 0-30V, 5A current.</b>	<ul style="list-style-type: none"> <li>• Independent Outputs with Separate Controls and One Fixed Output Supplies up to 150W total Power</li> <li>• Highest Output Resolution: 1mV/1mA</li> <li>• Insulation between three output channels effectively reduce the interference</li> <li>• Low ripple noise: &lt;math&gt;&lt;300 \mu V_{rms}/mV_{pp}&lt;/math&gt;</li> </ul> <ul style="list-style-type: none"> <li>• Dimensions <ul style="list-style-type: none"> <li>• 320mm (L)x 140mm (H)x 200mm (D)</li> </ul> </li> <li>• Weights <ul style="list-style-type: none"> <li>• About 5.8 Kg</li> </ul> </li> <li>• Display Type <ul style="list-style-type: none"> <li>• 3 and Half Digit LED Display</li> </ul> </li> <li>• DC Output Ratings <ul style="list-style-type: none"> <li>Voltage: 0-30V</li> <li>Current: 0-5A</li> </ul> </li> <li>• Line Regulation <ul style="list-style-type: none"> <li>Variable Output: CV:&lt;math&gt;\leq 0.01\%+2mV&lt;/math&gt;</li> <li>CC:&lt;math&gt;\leq 0.01\%+1mA&lt;/math&gt;</li> </ul> </li> <li>• Load Regulation <ul style="list-style-type: none"> <li>Variable Output: CV:&lt;math&gt;\leq 0.01\%+3mV&lt;/math&gt;</li> <li>CC:&lt;math&gt;\leq 0.01\%+3mA&lt;/math&gt;</li> </ul> </li> <li>• Noise and Ripple (20Hz-7MHz) <ul style="list-style-type: none"> <li>Variable Output: CV:&lt;math&gt;\leq 300\mu V_{rms}/2mV_{pp}&lt;/math&gt;</li> <li>CC:&lt;math&gt;\leq 3mA_{rms}&lt;/math&gt;</li> </ul> </li> <li>• Setting Resolution <ul style="list-style-type: none"> <li>Voltage: 1mV (Variable Output)</li> <li>Current: 1mA (Variable Output)</li> </ul> </li> </ul>	05
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10	<b>Function Generator (3 MHz)</b>	<p>Function Generator (3 MHz)  Input 230V AC 50Hz +/- 10% 5A. 3 MHz Function generator.  Generating Wave form like sine, square, triangle, pulse, DC.  LCD readout display. 3 Hz to 15 MHz digital.  Digital frequency</p> <ul style="list-style-type: none"> <li>• The Tabletop Function Generator is capable of Multi Signal I.e. Sine, Triangle and Square with Amplitude Control.</li> <li>• The Instrument has Display for Frequency</li> <li>• Separate control for frequency for fine and coarse adjustments.</li> <li>• 4 digits for frequency</li> <li>• Tough keys for selections for parameters frequency, Amplitude and waves.</li> <li>• On DC offset control.</li> <li>• <b>Frequency Range : 0.3Hz/3Hz/30Hz/300Hz/ 3KHz/30KHz/ 300KHz/3MHz</b></li> <li>• <b>Amplitude : (2Vp-p~20Vp-p)±20%</b></li> <li>• Output signal impedance : 50 ohm</li> <li>• Attenuation 20dB/40dB</li> <li>• Duty cycle 20%~80% (±10%)</li> <li>• Displaying : 4 digits LED frequency display</li> <li>• Sine wave : Distortion&lt;2%</li> <li>• Triangle wave : Linearity&gt;99%</li> <li>• Square wave : Rise edge times/ fall edge times&lt;100nS</li> <li>• Time base Symmetry frequency: 12MHz,</li> <li>• frequency stability: ±5x10</li> <li>• Signal frequency stability &lt;0.1%/Minute</li> <li>• Measurement error 0.5%</li> <li>• Weight : Approx. 2.5kgs</li> <li>• Power :220V/110V±10%, 50Hz/60Hz±5%</li> <li>• Front panel built with High Quality Multi Color Sticker.</li> <li>• Fuse for Short Circuit protection</li> <li>• Power inlet through the 3 pin Computer power cord (detachable).</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Terminals and BNC Socket.</li> <li>• The trainer is housed in Metal cabinet.</li> <li>• Size of the trainer set 235mmx103mm</li> </ul>	05
11	<b>Handheld Digital Multimeter 3 3/4 digits or above digits.</b>	<ul style="list-style-type: none"> <li>• Display : LCD</li> <li>• Max Display : 4000 (3 3/4 digits or above, automatic polarity, and unit symbol display)</li> <li>• Measurement Method : Analog to digital converter (in micro processor ADC+MCU)</li> <li>• Sampling rate : Approx.3 times/sec.</li> <li>• Over-Range Display : "OL" displayed</li> <li>• Low Battery Indicator: " "</li> <li>• Non Contact Voltage Detection</li> </ul>	09

- MAX / MIN record function
- Relative Measurement
- Data Hold to freeze the displayed data
- Transistor Test Facility
- Working Environment : (0~40)°C
- Relative Humidity : <80%
- Storage Condition : (-10~50)°C, relative humidity: <80%
- Battery : 2 pieces 1.5V battery ("AAA" 7# battery);
- Dimension : 185×93×35mm (length x width x height)
- Weight : Approx. 290g (including battery);
- Accessories: Test Leads, Temperature Probe, User Manual, Holster, Gift Box, and 2\*1.5V Batteries.
  
- T-RMS Auto-ranging
- Non Contact Voltage Detector
- Auto Power Off
- AC Bandwidth 40 – 400Hz
- Transistor Test
- Data Hold, MAX-MIN Record
- DC Voltage: 0 – 400mV/4V/40V/400V/1000V
- Accuracy: ±0.5%
- AC Voltage (T-RMS): 0 – 400mV/4V/40V/400V/750V
- Accuracy: ±0.8%
- DC Current: 0 – 400uA/4000uA/40mA /400mA/4A/20A
- Accuracy: ±1.0%
- AC Current (T-RMS): 0 – 400uA/4000uA/40mA/400mA/4A/20A
- Accuracy: ±1.5%
- Resistance: 0 – 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/ 40MΩ
- Accuracy: ±0.8%
- Capacitance: 0 – 40nF/400nF/4uF/40uF/400uF /4mF/40mF
- Accuracy: ±2.5%
- Frequency: 0 – 10Hz/100Hz/1kHz/10kHz/100kHz /1MHz/10MHz
- Accuracy: ±0.5%
- Temperature: -40°C~1000°C
- Accuracy: ±1.0%



- Diode Test and Continuity Test
- Confirms to CE, EMC/LVD, IEC1010

12

**DSO (100Mhz)Dual channels**

- Double Analog Channels
- High-resolution colorful LCD display system with resolution of 400 X 240 (or 800 X 480)
- To support plug and play USB storage instrument to communicate with computer.
- Automatic waveform and status setup.
- Waveform, setup, bitmap storage, waveform and setup reoccurrence.
- Elaborate view window extension function for delicate analysis of waveform details and profile
- Automatic measurement of 28 kinds of waveform parameters
- Automatic cursor tracing and measurement function
- Unique waveform recording and playback functions
- Embedded FFT
- Multiple mathematical calculation functions (including +, -, X, ÷) for waveform
- Edge, video, pulse width and ALT TRIG functions
- Multi-language menu display

Sampling rate	Real-time 1GS/s	Equivalent 50GS/s
Average Rate	N can be selected from 2,4, 8, 16, 32, 64, 128 and 256 after sampling all channels for N times at the same time.	

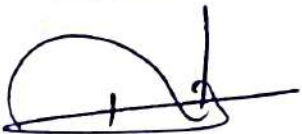
Input Coupling	DC, AC, GND
Input Impedance	1±2% MΩ for parallel connection to 24±3pF;
Probe Attenuation Coefficient	1 x, 10 x, 100 x and 1000 x
The Maximum Input Voltage	400V (DC ÷ AC peak value and input impedance of 1MΩ)
(Typical) delay between Channels	150ps

**Horizontal**

Waveform Interpolation	Sin (x) / x
Record Length	Sampling point of 2 x 521k
Storage Depth	25k
Scanning Scope	2ns/div-50ns/div
Precision of sampling rate and delay time	± 50ppm (for any interval of at least 1ms)
Measurement precision (full band width) for interval (ΔT)	Single mode: ±(1 Sampling interval + 50ppm x reading +0.6ms) > 16 average values: ± ( 1 Sampling interval +

04

		<p>Vertical</p> <p>50ppm x reading +0.4ms)</p> <p>Analog digital converter (A/D) 8-bit resolution with synchronous sampling for 2 channels</p> <p>Scope of deflection coefficient (V/div) : 1mV/div (in input BNC)</p> <p>Displacement Scope (Typical) optional band width limitation <math>\pm 10\text{div}</math> 20 MHz</p> <p>Low-frequency response (AC coupling, -3dB) <math>\leq 10\text{Hz}</math> (in BNC)</p> <p>DC gain precision (by adopting sampling or average mode of average value) <math>\pm 5\%</math> if vertical Sensitivity is 1mV/div or 2mV/div <math>\pm 4\%</math> if vertical Sensitivity is 5mV/div <math>\pm 3\%</math> if vertical Sensitivity is 10mV/div or 20mV/div</p> <p>DC measurement precision (by adopting average sampling mode) If vertical displacement is 0 and <math>N \geq 16</math>: <math>\pm (5\% \times \text{reading} + 0.1 \text{ grid} + 1\text{mV})</math> by selecting 1mV/div or 2mV/div; <math>\pm (4\% \times \text{reading} + 0.1 \text{ grid} + 1\text{mV})</math> by selecting 5mV/div; <math>\pm (3\% \times \text{reading} + 0.1 \text{ grid} + 1\text{mV})</math> by selecting 10mV/div to 20V/div; if vertical displacement is not 0 and <math>N \geq 16</math>; <math>\pm [(3\% \times (\text{reading} - \text{vertical displacement reading}) + (1\% \times \text{vertical displacement reading})) + 0.2\text{div}]</math> To add 2mV when setting from 5mV/div to 200mV/div : To add set value by 50mV when setting from 200mV/div to 20V/div;</p> <p>Measurement precision of voltage difference (DV) (by adopting sampling mode of average value) Voltage difference between any 2 points all the waveform after calculating average value for at least 16 captured</p>	
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waveform under the same setup and environment conditions:  
 $\pm(3\% \times \text{reading} + 0.05\text{div})$

Band Width

Analog Band Width	Single Channel Band Width	Rise Time
100MHz	100MHz	3.5ns

Trigger Sensitivity  $\leq 1 \text{ div}$

Trigger level Scope	Internal	$\pm 5\text{div}$ away from screen center
	EXT	$\pm 3\text{V}$
(Typical) precision of trigger level for signal of which Rise Time or Descend Time is not less than 20ns	Internal	$\pm (0.3\text{div} \times \text{V/div})$ (within scope of $\pm 4\text{div}$ from screen center)
	EXT	$\pm (6\% \text{ of set Value} \pm 40\text{mV})$

Pre-trigger ability Normal mode/scanning mode, pre-trigger/delay trigger with adjustable pre-trigger depth

Inhibition scope (Typical) level set to 50% 80ns-1.5s  
 Operation if frequency of input signal is not less than 50Hz

Edge Trigger : Ascend, descend, ascend & descend

Pulse width Trigger

Trigger mode	To be more than , less than or equivalent to positive/negative pulse width;
Pulse width scope	20ns - 10s

Video Trigger\*

Trigger Sensitivity (typical video trigger)	Internal	Peak value of 2div
	EXT	400mV
	EXT / 5*	2V

Signal system and row/ field frequency (Video trigger type) To support standard NTSC and PAL; Scope of row quantity IS 1-525 (NTSC) and 1-625 (PAL)

		CH 1 trigger      Edge, pulse width and video CH 2 trigger      Edge, pulse width and video Standard Accessories: <ul style="list-style-type: none"> <li>• 2 inactive probes of 1.2m and 1:1 (10: 1);</li> <li>• 1 power chord to meet national standards;</li> <li>• 1 "Operation Manual";</li> <li>• 1 "Warranty Certificate";</li> <li>• Communication control software of DSO</li> <li>• USB connecting Cables: D05</li> </ul>	
13	Bench top Digital Multimeter 4 1/2-digit or above digits	<ul style="list-style-type: none"> <li>• Power supply: 220V/ 110V AC</li> <li>• Manual range</li> <li>• 4 1/2 or above digit large LCD display with back light (displaying range: 75 x 40 mm), max. reading: 19999</li> <li>• Voltage measurement up to 1000VDC and 750V AC</li> <li>• DC,AC current up to 20A</li> <li>• ACV frequency response: 50kHz</li> <li>• Frequency, Resistance, Capacitance measurement, Triode, Diode check and Continuity Test</li> <li>• Overload protection: 250V rms</li> <li>• Operation environment: 0°C-40°C, &lt;75%R.H</li> <li>• Dimension: 260mm x 220mm x 82mm</li> <li>• Weight: approx. 1 kg</li> </ul>	05

The Bidders may download the Tender Documents directly from the website available at <http://www.vssut.ac.in> and the Tender cost fee of Rs. 500/- (Non-refundable) by way of separate Demand Draft drawn in favour of "The Registrar, Veer Surendra Sai University of Technology, Burla" payable at SBI, Burla should be enclosed along with the Bid. The Tender cost fee and the Earnest Money Deposit (EMD) amount should be submitted separately in separate demand drafts. In case of any bid clarification, responsibility lies with the bidders to collect the same from the website and the purchaser shall have no responsibility for any delay/ omission on part of the bidder.

**TIME SCHEDULE:**

- Tentative date of commencement of downloading bidding document from University website-07/10/2024
- Last date and time for Receipt of bids -08/11/2024 up to 04.00 PM
- Time and date of opening of Tender & Technical bid 11/11/2024 at 11.00 AM
- Time and date of opening of Financial bid 13/11/2024 at 11.00 AM
- Place of opening of Tender, Technical bid and financial bid and address for communication and receipt of bid documents:

**THE REGISTRAR**

**VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, ODISHA**  
 At- Burla, Po-Burla Engineering College, Dist-Sambalpur-768018,  
 Tel. No-0663-2430211 Fax No-0663-2430204



REGISTRAR  
 VSSUT, Burla

## General Terms and Conditions

**GENERAL TERMS & CONDITIONS OF CONTRACT FOR SUPPLY, INSTALLATION AND DEMONSTRATION OF THE HARDWARE (TRAINER KITS, MEASURING AND GENERATING INSTRUMENTS) REQUIRED FOR DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING, VSSUT, BURLA, ODISHA.**

### **1. Document Establishing Bidder's Eligibility & Qualification**

The Bidders shall furnish as part of the Bid the following Documents establishing Bidder's eligibility and qualification to the Purchaser's satisfaction.

- 1.1 Manufacturer / Authorized Distributor / Dealer having valid license / certificates for the quoted item and the direct Importers holding valid Import License Manufacturer / Authorized Distributor / Dealer of the product are eligible to participate in the Bid.
- 1.2 Bidders should have **ISI or equivalent** certification for quoted instruments and equipment. However, the Purchaser shall have the right to consider the items where ISI or equivalent certification is not applicable.
- 1.3 The Bidder whether manufacturer/ distributor/ dealer must have experience of supply and installation of the quoted items in reputed Government Institutions / Public Undertakings / reputed Private Institutions within India during last preceding 3(Three) years reckoned from the date of bid opening and the details must be submitted along with documentary proof.
- 1.4 The Bidders shall have to produce document in support of their service associates nearest to **Bhubaneswar/ Sambalpur, Odisha / within Odisha state.**
- 1.5 Bidder shall have to provide demonstration of hardware to **Purchaser.**
- 1.6 The Bidder shall quote items of one reputed Brand/model with all accessories in complete to perform functionality of Equipment.
- 1.7 Manufacturer has to submit copy of Industry Registration of quoted products and Tax Registration Certificate issued from the Competent authority. In case of Authorized Distributor / Dealer/Suppliers have to submit Manufacture authorization along with copy of above documents of Manufacture Industry.

### **2. Document Establishing Goods Eligibility**

The hardware and software offered against the schedule of requirement, should be in accordance with the stipulated specifications and of one reputed brand/model (N.B: Specifications of equipment of items are to be procured as per detailed specifications mentioned in pp. 01-12)

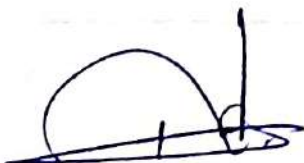
- 2.1 The documentary evidence establishing the brand and the model may be in the form of literature, pamphlets, manuals etc.

- 2.2 Detailed description of hardware and software with essential technical and performance characteristics may also be furnished.
- 2.3 The Bidders should clearly mention in their bid regarding the compatibility of the various equipment or the individual units.
- 2.4 The quantity shown in the bid can be increased or decreased to any extent depending upon the actual requirement.
- 2.5 The hardware should have testing certificate for its satisfactory functioning.

### 3. Technical Bid (COVER - A)

The following document should be submitted in cover-A.

- 3.1 Earnest Money Deposited (EMD)
- 3.2 Tender Paper cost DD of Rs.500 (Non-refundable)
- 3.3 Technical details of the Items/Equipment/hardware/firmware as per Annexure-V.
- 3.4 Copy of the manufacturing license/ import license/ Authorized Distributor/ Dealer certificates
- 3.5 Copy of the authorization from the Manufacturing Company in case of Authorized Distributor /Dealer. in along with Manufacturer Industry Registration and Tax Registration Certificate.
- 3.6 GST clearance certificate up to **date** where applicable/Copy of GST regd. certificate.
- 3.7 Performance/ Market standing certificate establishing that the Bidders have executed supply of similar items as mentioned in Schedule of Requirement of hardware and software to different Govt. Organizations/ Government PSUs / reputed Private Institutions.(proof of documents)
- 3.8 Copy of the IT PAN Card.
- 3.9 Detail name, address, telephone no. fax, e-mail of the firm and of the Director/Managing Director/ Proprietor of the firm (As per Annexure IV)
- 3.10 Address, Telephone No., e-mail, Fax of the Branch Office/ Contact Person/ Liaisoning Office in Odisha. (As per Annexure IV)
- 3.11 Power of Attorney/ Authorization to a person for liaisoning and monitoring the business on behalf of the manufacturer / bidder but not entitled to raise the bills.
- 3.12 Document if any to establish the recognition of the manufacturing unit in respect of ISO or equivalent.
- 3.13 **The original bid document signed & sealed by authorized person in each page as a token of acceptance of all terms and conditions of the tender with original receipt.**



- 3.14 Documentary evidence establishing that the hardware, software and ancillary services to be supplied by the Bidders shall confirm to the Bidding Document
- 3.15 Any deviation in the specification of the item including standard accessories / optional accessories in complete for functionality of hardware should be marked in **bold letters**.
- 3.16 Details of hardware, if any, should be provided.
- 3.17 The details of the service station / service associates nearest to Bhubaneswar/Sambalpur shall have to be submitted to qualify in the technical bid.

#### 4. Price Bid (COVER – B)


- 4.1 The hard copy of price bid giving the rates for various instruments & equipment and other items should be submitted along with sealed soft copy of **price bid in Excel format through CD/Pen drive** both in separate sealed cover hereinafter called **Cover B (Price Bid)**. **Price Bid (Cover - B)** of the bidders who qualify in **Technical Bid (Cover – A)** will only be opened and will be communicated through **E-mail/Fax/University Website**.
- 4.2 Each quoted item and all accessories should cover the warranty / guarantee for **2(two)** years from the date of commissioning (**Annexure-II**).
- 4.3 The **Cover B** of the technically qualifying bidders shall be only opened at the Office of the **“The Registrar, Veer Surendra Sai University of Technology, Burla”** on Dt: 13/11/2024 at 11.00 AM as mentioned in time schedule previously, in case of any kind of amendment in the date and time, it will be Informed to the firms through university website.
- 4.4 The cost of standard accessories shall be included in basic price and optional accessories shall have to be quoted separately.

#### 5 BID CONDITIONS

- 5.1 The quoted rate shall not vary with the quantum of order placed or destination point.
- 5.2 A copy of the original bid conditions and the schedules should be signed by the bidder at the bottom of each page with the office seal duly affixed and returned along with the bid. Bid schedule should be duly filled in with an **index** and **page number** for the documents, enclosures & EMD etc. **Paging** must be done for all the documents submitted.
- 5.3 Bids should be type written or Computerized and every correction/ over writing in the bid should invariably be attested with signature of the bidder with date before submission of the bids to the authorities concerned. No revision of price upward or downward will be allowed once the bid is opened. However the purchaser shall have the right for considering the exchange rate of foreign currencies on verification of documents.

#### 5.4 Language of Bid

The Bid prepared by the bidders and all correspondence and document relating to the bid exchanged by the Bidders and the *Purchaser*, shall be written in the English language. Supporting document and printed literature furnished by the Bidders may be written in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern.



## 5.5 Bid Price

- The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialling, dating and re-writing.
- All duties, taxes(excluding GST), and other levies payable on the raw materials and components, Forwarding and Handling charges, Insurance charges, commissioning including testing and training, any other charges if applicable shall be included in the basic unit price as per annexure-1.
- GST in connection with the sale shall be shown separately.
- The rates quoted by the bidders shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- The price shall be quoted in Indian Rupees only.

## 5.6 GST clearance

Copies of valid GST clearance Certificates shall be furnished by the Bidders and the originals of the above certificates shall be produced to the purchaser before placement of notification of award if asked for by the Purchaser.

## 5.7 EMD

All bidders are required to submit **EMD of 2% of total bidding estimation (if not participating for all the items)** in shape of **Demand draft** drawn in favour of "The Registrar, Veer Surendra Sai University of Technology, Burla" payable at SBI, Burla only. The EMD shall be in Indian Rupees (₹).

**NOTE:** Non-submission of EMD or submission of less EMD than the desired one shall result in rejection of Bid. The EMD deposited against other Bids cannot be adjusted or considered for this Bid. No interest is payable on EMD. Parties are invited to participate in all items or some items.

## 5.8 SUBMISSION OF BIDS

### Sealing and Marking of Bids

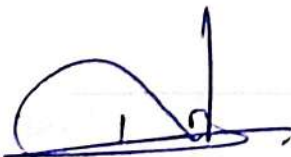
Bid should be submitted in two Bid system containing two parts as detailed below.

### Sealed Cover-A: Technical Bid.

### Sealed Cover-B: Price Bid (hardcopy & sealed soft copy in CD/pen drive)

Both the sealed envelopes should then be put in one outer cover and each cover should have the following indication:

- i) Name of Dept.: \_\_\_\_\_
- ii) Reference No of Bid \_\_\_\_\_
- iii) Bid regarding \_\_\_\_\_
- iv) Due date & time for submission of the Bid \_\_\_\_\_
- v) Due date & time for opening of the Bid \_\_\_\_\_
- vi) Name of the Firm \_\_\_\_\_





**NOTE:**

A. Bids submitted without following two Bid system procedures as mentioned above will be summarily rejected.

B. Please Note that prices should not be indicated in the Technical Bid. The Prequalification document including EMD as required in the Bid document should invariably be accompanied with the Technical Bid (Cover A).

The outer envelope shall indicate the name and address of the bidders to enable the bid to be returned unopened in case it is declared "late". If the cover containing the outer envelope is not sealed and marked as required, *Purchaser* will assume no responsibility for the bid's misplacement or premature opening.

The above procedure shall be adopted both for the Technical bid and price bid separately. Telex, cable, email or facsimile bids will be rejected.

**5.9 Deadline for Submission of Bids**

Bids must be received by the *Purchaser* at the address specified not later than the time and date specified in the Invitation of Bids. In the event of the specified date for the submission of bids being declared a holiday for the *Purchaser*, the bids will be received up to the appointed time on the next working day.

The *Purchaser* may, at its discretion, extend this deadline for submission of bids by amending the bid document, in which case all previous rights and obligations of the purchasers and bidders will remain same till the extended date.

**5.10 Modification and Withdrawal of Bids**

No Modification and Withdrawal of Bids is allowed between the interval of time of submission and the last date and time of the bids.

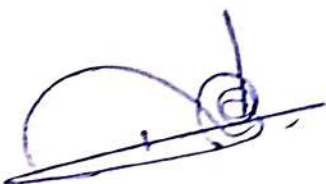
No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidders on the bid form.

**5.11 BID OPENING**

5.12 The *Purchaser* will open all bids, in the presence of bidder's representatives who choose to attend at 11/11/2024 at 11.00 AM at the Office of the "The Registrar, Veer Surendra Sai University of Technology, Burla", Sambalpur, Odisha.

5.13 The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the *Purchaser*, the bids shall be opened at the appointed time and location on the next working day or will be informed to the firms through university Website.

5.14 The bidder's names, and the presence or absence of the requisite EMD and such other details as the *Purchaser*, at its discretion, may consider appropriate will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the bidders.



### 5.15 Acceptance of the Bid

- Bidders submitting bids would be considered, who have accepted all terms and conditions. No enquiries, verbal or written, shall be entertained in respect of acceptance or rejection of the bid.
- Genuine equipment(s) and software etc. should be supplied. Bidders should indicate the source of supply i.e. name and address of the manufacturers from whom the items are to be sourced.
- Supply of equipment means – Installation and Commissioning (except civil works), Demonstration as well as Training at site. No separate charges will be paid on this account.

### 5.16 Rejection of the Bid

The Bid document shall be out-rightly rejected under following stipulation and no correspondence will be entertained whatsoever.

- If the Bidders has not furnished the required Tender paper cost (DD) and EMD or EMD exemption certificate from competent authority.
- If the Bidders has not submitted the Price as per the prescribed format Annexure-I
- **Manufacturing Authorization Annexure-III and in case of Authorized Distributor / Dealer/Suppliers have to submit Manufacture authorization along with the copy of above documents of Manufacture Industry.**
- Photo copy of the up-to-date valid manufacturing license/ import license (if it is imported) /dealership certificate/Distributor certificate of the product along with Tax registration Certificate of Manufacturer issued from competent authority.
- If the bidders, whether manufacturer or authorized distributor/ dealer have not supplied the required quantity for qualification as per the eligibility criteria and not submitted the performance statement at Annexure-IV with supporting documents.
- If the bidder has not furnished technical details of the hardware with **one make & model** as per Annexure-V.
- **If bidder will quote items of more than one make/model.**
- If the bidders have not agreed to give bid validity.

### 5.17 Purchaser's Right to Accept any Bid and to Reject any Bid

The Purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all the bids without assigning any reason thereof at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or Bidders on the grounds of such action of the purchaser. In case no bidder qualifies as per qualifying criteria and standards, purchaser may at his discretion relax qualification criteria for award of contract.

### 5.18 Evaluation and Comparison of Bids

The comparison shall be of FOR destination price basis including the price of all costs wherever applicable as well as duties and taxes (but excluding GST) paid or payable on Machineries, instruments & equipment incorporated or to be incorporated in the items including the warrantee/guarantee period from the date of installation.

- The Purchaser's evaluation of a bid will take into account, the price of incidental services in addition to the bid price.
- The purpose of bid evaluation is to determine substantially responsive bid with the lowest evaluated cost, but not necessarily the lowest submitted price, which should be recommended for award.
- Evaluation of bids should be made strictly in terms of the provisions in the bid document to ensure compliance with the commercial and technical aspects.
- The past performance of the suppliers will be taken into account while evaluating the bids.
- Cost of the inland transportation, insurance and other costs within the Purchaser's Country incidental to delivery of the goods to their final destination;
- Delivery schedule offered in the bid;
- Deviations in payment schedule from that specified in the General Terms & Conditions of Contract;
- The projected operating and maintenance costs during the life of the equipment/ goods.
- The performance and productivity of the equipment/ goods offered;
- The quality and adaptability of the equipment/ goods offered.
- Any other point as deemed proper to be incorporated by the evaluation committee.
- Alternative options of offer shall not be allowed.
- Each Bidder shall submit only one quotation with one make & model.
- The quotation would be evaluated separately for each item
- Sales Tax in connection with sale of goods shall not be taken into account in evaluation.
- Negotiation shall be made with the lowest evaluated bidder.
- Lowest evaluated price shall be taken in to consideration, but not the lowest quoted price.

## 6. Supply Conditions

### 6.1 Delivery of Goods

The delivery of goods shall be made by the supplier to the Consignee in accordance to the order placed as shall be detailed in the Schedule of requirements & technical specifications. All the items must be delivered within 45 days from the date of issue of purchase order.

### 6.2 Instruments, Equipment, Demonstration cum Inspection

Purchaser reserves the right to ask for demonstration cum inspection of the equipment

Wherever applicable.

### 6.3 Inspection/ Test/Training

The supplier shall get each equipment inspected in manufacturer's works and submit a test certificate (New & Unused) and also guarantee/warranty certificate that the equipment confirms to laid down specifications.

The supplier shall invite the purchaser for pre-dispatch inspection. The Purchaser or his representative shall have the right to inspect/ examine/ test the goods in conformity with the contract awarded/supply order during the production or before dispatch from the manufacturer's premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the equipment on receipt at destination.

The inspection/examination/ test may be conducted in the premises of the Supplier or at the goods final destination or at the premises of the consignee, as will be decided by the Purchaser.

The purchaser's right to inspect/ examine/test & where necessary to reject the instruments after the arrival of the goods at the final destination, shall in no way be limited or waived by the reason of the goods having been inspected and tested by the manufacturer previously. In case of rejection of the goods at the final destination after inspection and test as stipulated above and in case any inspected/ tested goods fail to confirm to the specification/ working condition, the purchaser may reject them and the supplier shall replace/ repair the same free of cost.

#### 6.4 Warrantee Period (comprehensive)

The Bidders must quote for a minimum period of **2 (Two) years** of comprehensive warranty from the date of completion of the satisfactory commissioning as per (Annexure-II). This also includes all accessories related to instruments & equipment quoted for.

#### 6.5 Payment Terms

No advance payment will be made by the Purchaser to the supplier for performance of the contract. 90% of the contract price shall be paid within 20 (twenty) days after satisfactory supply, installation, demonstration, Commissioning & training and stock entry of bills of the goods within due date of delivery. Remaining 10% of the contract price shall be paid after 10 (ten) days of period from the date and day of installation subject to satisfactory performance of equipment(s).

#### 6.6 Transportation

The Supplier shall be required to meet all transport and storage expenses until commissioning of the instrument(s) / equipment covered in the contract.

#### 6.7 Taxes and Duties

The Supplier shall be entirely responsible for payment of all Taxes, Duties etc. incurred until delivery of the contract goods to the Consignee subject to recovery afterwards in the bill as claimed in the Bid offer.

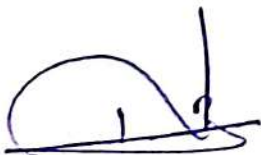
GST as applicable is payable, to the suppliers of the State of Odisha if claimed in the Bid offer.

GST will be paid to the Suppliers of the outside State other than Odisha, if claimed in the Bid offer. Any revision of GST shall automatically be taken into account.

#### 6.8 Incidental Services

The Supplier shall be required to provide any or all of the following services :( The cost should be included in the quoted Price)

- Furnishing of detailed literature/pamphlets/ circuit diagram/ operation & maintenance manual / drawings (as applicable) for each appropriate unit of supplied goods.



- Furnishing of tools required for assembly and / or maintenance of the supplied goods.
- Performance or supervision of on-site assembly and the supplied goods.
- Performance or supervision or maintenance and/ or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty/ guarantee obligations under the contract.

#### 6.9 Period of Validity of Bids

- The bid rates should be kept open/ valid for a period of **180** days from the date the Bids are opened.
- A bid valid for a shorter period i.e. less than **180** days shall be rejected, as nonresponsive.
- In absence of any indication of the date of validity in the bid, it will be presumed that the offer will remain valid for the minimum period i.e. **180** days as prescribed above.
- In exceptional circumstances the purchaser may solicit the bidders consent for extension of the period of validity. If agreed upon, the bid security so deposited shall also be suitably extended.

#### 6.10 Commissioning Period

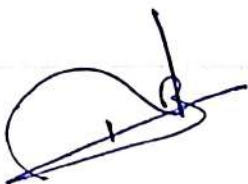
Maximum commissioning period is **15 days** from the date of supply OR **60 days from the date of issue of Purchase Order** failing which the purchaser will have the right to impose penalty for the delay period @ **0.5% per week of the contract value of item/items excluding taxes from the bill amount subject to maximum of 10%**. However, Registrar has right to extend the delivery period/commissioning period in special cases.

#### 6.11 Penalty against Non Supply

In case of non-supply of Stores within the due date i.e. within the date of delivery the EMD deposited by the bidder shall be forfeited.

#### 6.12 Rejected items

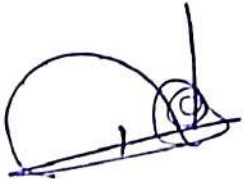
No payment shall be made for rejected supplied items. Rejected items must be removed by the bidders within two weeks of the date of rejection at their own cost and replace them immediately. In case these items are not removed they will be auctioned by the purchaser (at the risk and responsibility of the suppliers) without any further notice.



### 6.13 Jurisdiction of the Court

The Purchaser and the Supplier shall agree that the competent Court at Sambalpur shall have the jurisdiction to try and decide anything between the parties and they may approach the Competent Court at Sambalpur if required at any time.

  
REGISTRAR  
VSSUT Burla

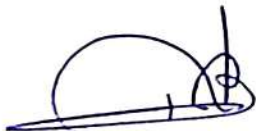


**Format for Price Scheduled**

**ANNEXURE-I**

Sl.No.	Description of Item and Model	Quantity	Basic Unit Price including GST
1	<p><b>Diode characteristic trainer kit</b></p> <ul style="list-style-type: none"> <li>• Study of V-I Characteristics of               <ol style="list-style-type: none"> <li>5. PN Junction in Forward Bias.</li> <li>6. Zener Diode in Forward Bias.</li> <li>7. PN Junction in Reverse Bias.</li> <li>8. Zener Diode in Reverse Bias.</li> </ol> </li> </ul> <p><u>Measuring Meters:</u></p> <ul style="list-style-type: none"> <li>• Ammeter 15mA/150uA DC.</li> <li>• Voltmeter 3V/30V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-3/30V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• Silicon Diode (1N4007)</li> <li>• Germanium Diode (OA79)</li> <li>• Two Different Voltages Zener Diodes.</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> </ul> <p>The trainer is housed in ABS Plastic cabinet Size of the trainer set 10"x8"</p>	05	
2	<p><b>Bread Board kit with power supply</b> <b>ANALOG AND DIGITAL BREAD BOARD TRAINER (ADT)</b></p> <ul style="list-style-type: none"> <li>• Study and Construction of Various Analog and Digital Electronics Lab Experiment</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Power Supply IC Regulated +5V, <math>\pm 12V</math> @ 250mA.</li> <li>• DC Power Supply IC Regulated 0 to 15V @ 250mA</li> <li>• AC Power Supply 15-0-15VAC</li> <li>• Operated On Mains Power 230v, 50hz <math>\pm 10\%</math></li> <li>• Solder-less, breadboard (Easy to remove): Interconnected with tie points Nickel plated contact, fitted with all DIP sizes and all components with lead and solid wire. It can be changed and replaced for different purposes and can be connected with demonstration panel.</li> <li>• Logic Inputs &amp; Outputs 8 Bit</li> </ul>	05	

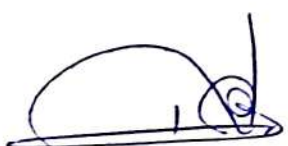
	<ul style="list-style-type: none"> <li>• One Clock Generator 10Hz Variable.</li> <li>• One Mono Pulsar</li> <li>• One Logic Probe</li> <li>• One Variable Resistors are given on Board.</li> <li>• Front Panel Built With High Class Insulated Printed Circuit Board Sheet With Well Printed Circuits And Symbols.</li> <li>• Fuse For Short Circuit Protection</li> <li>• Instruction Manual.</li> <li>• Connections are brought out through 2mm Brass Sockets.</li> <li>• Patch Cords 2mm with Bread Board Pin</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> </ul> <p>Size of the trainer set 12"x8"</p>		
3	<p><b>MOSFET characteristic trainer kit</b></p> <ul style="list-style-type: none"> <li>• Study of V-I Characteristics of MOSFET</li> </ul> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Voltmeter 5V DC.</li> <li>• Ammeter 30mA DC.</li> <li>• Voltmeter 30V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-5V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-30V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• MOSFET IRF540</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 12"x8"</li> </ul>	05	
4	<p><b>JFET characteristic trainer kit</b></p> <ul style="list-style-type: none"> <li>• Study of V-I Characteristics of JFET</li> </ul> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Volt meter 3V DC.</li> <li>• Ammeter 20mA DC.</li> <li>• Voltmeter 15V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-3V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-15V DC, 150mA.</li> </ul>	05	





	<ul style="list-style-type: none"> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• FET BFW10</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> </ul> <p>Size of the trainer set 12"x8"</p>		
5	<p><b>PNP/NPN Transistor Trainer kit(CE,CB,CC)</b></p> <p>Study of Common Base Common Emitter and Common Collector</p> <p>Input Characteristics of NPN Transistor</p> <p>Output Characteristics of NPN Transistor</p> <p>Input Characteristics of PNP Transistor</p> <p>Output Characteristics of PNP Transistor</p> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Ammeter 50mA DC.</li> <li>• Ammeter 250uA/50mA DC.</li> <li>• Voltmeter 10V DC.</li> <li>• Voltmeter 1V/10V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• DC Supply IC Regulated 0-1/10V DC, 150mA.</li> <li>• DC Supply IC Regulated 0-10V DC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• NPN Transistor SL100</li> <li>• PNP Transistor SK100</li> <li>• Voltage Control through Potentiometer.</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and Symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> </ul>	05	

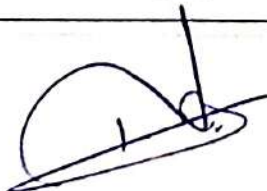
	<ul style="list-style-type: none"> <li>Size of the trainer set 15"x8"</li> </ul>		
6	<p><b>OP-AMP Trainer kit for Inverting and Non-Inverting Experiment.</b></p> <ul style="list-style-type: none"> <li>Study of Inverting and Non Inverting Amplifier using Op-amp</li> </ul> <p><u>Power Supplies;</u></p> <ul style="list-style-type: none"> <li>Dual DC Power Supply IC Regulated <math>\pm 15V</math> DC, 150mA.</li> <li>DC Power Supply IC Regulated 0-12V DC, 150mA.</li> <li>Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Digital Meter:</u></p> <ul style="list-style-type: none"> <li>Voltmeter 20V</li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>741 IC (Op-amp)</li> <li>Resistors</li> <li>Capacitors</li> <li>Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>Fuse for Short Circuit protection</li> <li>Instruction manual.</li> <li>Connections are brought out through 4mm Colored Sockets.</li> <li>Patch Cords 4mm.</li> <li>The trainer is housed in ABS Plastic cabinet.</li> <li>Size of the trainer set 12"x8"</li> </ul>	05	
7	<p><b>IC Tester</b></p> <p>UICT is a Table-Top version, designed as a powerful tool for manufacturers, servicing engineers, R&amp;D personnel to test a wide range of IC's of Digital, Analog, Digital and Analog IC tester up to 20 pins like 14,16,18,20 pin (DIP) dual inline,</p> <p>SUPPLY VOLTAGE: 230V 50Hz AC<math>\pm 10\%</math> 5A.</p> <p>TEST RANGE: Logical gates, counters, flip-flop, buffer, latches, shift registers, encoders, decoders, monostaable multivibrator, multiplexer, cross point switches.</p> <p>One mode to test the ICs. Low duration of testing. Analog ICs up to 20 pins in DIP package.</p>	01	



8	<p><b>Diode rectifier trainer kit</b> Study of</p> <ul style="list-style-type: none"> <li>• Half Wave Rectifier Circuit</li> <li>• Full Wave Rectifier Circuit</li> <li>• Bridge Rectifier Circuit</li> <li>• Filter Circuit</li> <li>• Ripple Factor of an Ac Circuit</li> </ul> <p><u>Analog Meters:</u></p> <ul style="list-style-type: none"> <li>• Voltmeter 30V AC.</li> <li>• Ammeter 250mA DC.</li> <li>• Voltmeter 30V DC.</li> </ul> <p><u>Power Supplies:</u></p> <ul style="list-style-type: none"> <li>• AC Isolated Power Supply 12-0-12 VAC, 150mA.</li> <li>• Operated on Mains power 230V, 50Hz <math>\pm 10\%</math></li> </ul> <p><u>Components are mounted on the panels are:</u></p> <ul style="list-style-type: none"> <li>• Diode 1N4007</li> <li>• Capacitors 1000<math>\mu</math>F and 100<math>\mu</math>F Controlled By Switches.</li> <li>• Inductor 200mH</li> <li>• Load Resistor through Rotary Switch</li> <li>• Front panel built with high class insulated Printed Circuit Board sheet with well printed circuits and symbols.</li> <li>• Fuse for Short Circuit protection</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Sockets.</li> <li>• Patch Cords 4mm.</li> <li>• The trainer is housed in ABS Plastic cabinet.</li> <li>• Size of the trainer set 15"x10"</li> </ul>	05	
9	<p><b>Transistor Power Supply (TPS)/DC power Supply 0-30V, 5A current.</b></p> <ul style="list-style-type: none"> <li>• Independent Outputs with Separate Controls and One Fixed Output Supplies up to 150W total Power</li> <li>• Highest Output Resolution: 1mV/1mA</li> <li>• Insulation between three output channels effectively reduce the interference</li> <li>• Low ripple noise: &lt;300 u Vrms/mVpp</li> </ul>	05	

	<p>Dimensions • 320mm (L)x 140mm (H)x 200mm (D)</p> <p>• Weights • About 5.8 Kg</p> <p>• Display Type • 3 and Half Digit LED Display</p> <p>• DC Output Ratings Voltage: 0-30V Current: 0-5A</p> <p>• Line Regulation Variable Output: CV: <math>\leq 0.01\% + 2mV</math> CC: <math>\leq 0.01\% + 1mA</math></p> <p>• Load Regulation Variable Output: CV: <math>\leq 0.01\% + 3mV</math> CC: <math>\leq 0.01\% + 3mA</math></p> <p>• Noise and Ripple (20Hz-7MHz) Variable Output: CV: <math>\leq 300\mu V_{rms} / 2mV_{pp}</math> CC: <math>\leq 3mA_{rms}</math></p> <p>• Setting Resolution Voltage: 1mV (Variable Output) Current: 1mA (Variable Output)</p>		
10	<p><b>Function Generator (3 MHz)</b> Input 230V AC 50Hz +/- 10% 5A. 3 MHz Function generator. Generating Wave form like sine, square, triangle, pulse, DC. LCD readout display. 3 Hz to 15 MHz digital. Digital frequency</p> <ul style="list-style-type: none"> <li>• The Tabletop Function Generator is capable of Multi Signal i.e. Sine, Triangle and Square with Amplitude Control.</li> <li>• The Instrument has Display for Frequency</li> <li>• Separate control for frequency for fine and coarse adjustments.</li> <li>• 4 digits for frequency</li> <li>• Tough keys for selections for parameters frequency, amplitude and waves.</li> <li>• On DC offset control.</li> <li>• Frequency Range : 0.3Hz/3Hz/30Hz/300Hz/3KHz/30KHz/300KHz/3MHz</li> <li>• Amplitude : (2Vp-p~20Vp-p)<math>\pm 20\%</math></li> <li>• Output signal impedance : 50 ohm</li> <li>• Attenuation 20dB/40dB</li> </ul>	05	

	<ul style="list-style-type: none"> <li>• Duty cycle 20%~80% (<math>\pm 10\%</math>)</li> <li>• Displaying : 4 digits LED frequency display</li> <li>• Sine wave : Distortion&lt;2%</li> <li>• Triangle wave : Linearity&gt;99%</li> <li>• Square wave : Rise edge times/ fall edge times&lt;100nS</li> <li>• Time base Symmetry frequency: 12MHz,</li> <li>• frequency stability: <math>\pm 5 \times 10</math></li> <li>• Signal frequency stability &lt;0.1%/Minute</li> <li>• Measurement error 0.5%</li> <li>• Weight : Approx. 2.5kgs</li> <li>• Power :220V/110V<math>\pm 10\%</math>, 50Hz/60Hz<math>\pm 5\%</math></li> <li>• Front panel built with High Quality Multi Color Sticker.</li> <li>• Fuse for Short Circuit protection</li> <li>• Power inlet through the 3 pin Computer power cord (detachable).</li> <li>• Instruction manual.</li> <li>• Connections are brought out through 4mm Colored Terminals and BNC Socket.</li> <li>• The trainer is housed in Metal cabinet.</li> <li>• Size of the trainer set 235mmx103mm</li> </ul>		
11	<p><b>Handheld Digital Multimeter 3 3/4 digits or above digit</b></p> <ul style="list-style-type: none"> <li>• Display : LCD</li> <li>• Max Display : 4000 (3 3/4 digits, automatic polarity, and unit symbol display)</li> <li>• Measurement Method : Analog to digital converter (in micro processor ADC+MCU)</li> <li>• Sampling rate : Approx.3 times/sec.</li> <li>• Over-Range Display : "OL" displayed</li> <li>• Low Battery Indicator: " "</li> <li>• Non Contact Voltage Detection</li> <li>• MAX / MIN record function</li> <li>• Relative Measurement</li> <li>• Data Hold to freeze the displayed data</li> <li>• Transistor Test Facility</li> <li>• Working Environment : (0~40)<math>^{\circ}</math>C</li> <li>• Relative Humidity : &lt;80%</li> <li>• Storage Condition : (-10~50)<math>^{\circ}</math>C, relative humidity: &lt;80%</li> <li>• Battery : 2 pieces 1.5V battery ("AAA" 7# battery);</li> <li>• Dimension : 185x93x35mm (length x width x height)</li> <li>• Weight : Approx. 290g (including battery);</li> <li>• Accessories: Test Leads, Temperature Probe, User Manual, Holster, Gift Box, and 2*1.5V Batteries.</li> </ul> <p>• T-RMS Auto-ranging</p>	09	




	<ul style="list-style-type: none"> <li>• Non Contact Voltage Detector</li> <li>• Auto Power Off</li> <li>• AC Bandwidth 40 – 400Hz</li> <li>• Transistor Test</li> <li>• Data Hold, MAX-MIN Record</li> <li>• DC Voltage: 0 – 400mV/4V/40V/400V/1000V</li> <li>• Accuracy: <math>\pm 0.5\%</math></li> <li>• AC Voltage (T-RMS): 0 – 400mV/4V/40V/400V/750V</li> <li>• Accuracy: <math>\pm 0.8\%</math></li> <li>• DC Current: 0 – 400uA/4000uA/40mA /400mA/4A/20A</li> <li>• Accuracy: <math>\pm 1.0\%</math></li> <li>• AC Current (T-RMS): 0 – 400uA/4000uA/40mA/400mA/4A/20A</li> <li>• Accuracy: <math>\pm 1.5\%</math></li> <li>• Resistance: 0 – 400<math>\Omega</math>/4k<math>\Omega</math>/40k<math>\Omega</math>/400k<math>\Omega</math>/4M<math>\Omega</math>/ 40M<math>\Omega</math></li> <li>• Accuracy: <math>\pm 0.8\%</math></li> <li>• Capacitance: 0 – 40nF/400nF/4uF/40uF/400uF /4mF/40mF</li> <li>• Accuracy: <math>\pm 2.5\%</math></li> <li>• Frequency: 0 – 10Hz/100Hz/1kHz/10kHz/100kHz /1MHz/10MHz</li> <li>• Accuracy: <math>\pm 0.5\%</math></li> <li>• Temperature: -40°C~1000°C</li> <li>• Accuracy: <math>\pm 1.0\%</math></li> <li>• Diode Test and Continuity Test</li> <li>• Confirms to CE, EMC/LVD, IEC1010</li> </ul>		
12	<p><b>DSO (100Mhz)Dual channels</b></p> <ul style="list-style-type: none"> <li>• Double Analog Channels</li> <li>• High-resolution colorful LCD display system with</li> </ul>	04	

	<p>resolution of 400 X 240 (or 800 X 480)</p> <ul style="list-style-type: none"> <li>To support plug and play USB storage instrument to communicate with computer.</li> <li>Automatic waveform and status setup.</li> <li>Waveform, setup, bitmap storage, waveform and setup reoccurrence.</li> <li>Elaborate view window extension function for delicate analysis of waveform details and profile</li> <li>Automatic measurement of 28 kinds of waveform parameters</li> <li>Automatic cursor tracing and measurement function</li> <li>Unique waveform recording and playback functions</li> <li>Embedded FFT</li> <li>Multiple mathematical calculation functions (including +, -, X, ÷) for waveform</li> <li>Edge, video, pulse width and ALT TRIG functions</li> <li>Multi-language menu display</li> </ul>														
	<table> <tr> <td>Sampling rate</td> <td>Real-time</td> <td>Equivalent</td> </tr> <tr> <td></td> <td>1GS/s</td> <td>50GS/s</td> </tr> </table>	Sampling rate	Real-time	Equivalent		1GS/s	50GS/s								
Sampling rate	Real-time	Equivalent													
	1GS/s	50GS/s													
	<p>Average Rate</p> <p>N can be selected from 2,4, 8, 16, 32, 64, 128 and 256 after sampling all channels for N times at the same time.</p>														
	<table> <tr> <td>Input Coupling</td> <td>DC , AC , GND</td> </tr> <tr> <td>Input Impedance</td> <td>1±2% MΩ for parallel connection to 24±3pF;</td> </tr> <tr> <td>Probe Attenuation Coefficient</td> <td>1 x, 10 x, 100 x and 1000 x</td> </tr> <tr> <td>The Maximum Input Voltage</td> <td>400V (DC + AC peak value and input impedance of 1MW)</td> </tr> <tr> <td>(Typical) delay between Channels</td> <td>150ps</td> </tr> </table>	Input Coupling	DC , AC , GND	Input Impedance	1±2% MΩ for parallel connection to 24±3pF;	Probe Attenuation Coefficient	1 x, 10 x, 100 x and 1000 x	The Maximum Input Voltage	400V (DC + AC peak value and input impedance of 1MW)	(Typical) delay between Channels	150ps				
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	<p>Horizontal</p> <table> <tr> <td>Waveform Intercalation</td> <td>Sin (x) / x</td> </tr> <tr> <td>Record Length</td> <td>Sampling point of 2 x 521k</td> </tr> <tr> <td>Storage Depth</td> <td>25k</td> </tr> <tr> <td>Scanning Scope</td> <td>2ns/div-50ns/div</td> </tr> <tr> <td>Precision of sampling rate and delay time</td> <td>± 50ppm (for any interval of at least 1ms)</td> </tr> <tr> <td>Measurement precision (full band width) for interval (ΔT)</td> <td>Single mode: ±(1 Sampling interval + 50ppm x reading +0.6ms) &gt; 16 average values: ± ( 1 Sampling interval + 50ppm x reading +0.4ms)</td> </tr> </table>	Waveform Intercalation	Sin (x) / x	Record Length	Sampling point of 2 x 521k	Storage Depth	25k	Scanning Scope	2ns/div-50ns/div	Precision of sampling rate and delay time	± 50ppm (for any interval of at least 1ms)	Measurement precision (full band width) for interval (ΔT)	Single mode: ±(1 Sampling interval + 50ppm x reading +0.6ms) > 16 average values: ± ( 1 Sampling interval + 50ppm x reading +0.4ms)		
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	<p>Vertical</p> <table> <tr> <td>Analog digital converter (A/D)</td> <td>8-bit resolution with synchronous sampling for 2 channels</td> </tr> <tr> <td>Scope of deflection</td> <td>: 1mV/div (in input</td> </tr> </table>	Analog digital converter (A/D)	8-bit resolution with synchronous sampling for 2 channels	Scope of deflection	: 1mV/div (in input										
Analog digital converter (A/D)	8-bit resolution with synchronous sampling for 2 channels														
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	<p>coefficient (V/div)</p> <p>Displacement Scope (Typical) optional band width limitation</p> <p>Low-frequency response (AC coupling, -3dB)</p> <p>DC gain precision (by adopting sampling or sampling mode of average value</p> <p>DC measurement precision (by adopting average sampling mode)</p> <p>Measurement precision of voltage difference (DV) (by adopting sampling mode of average value)</p>	<p>BNC)</p> <p><math>\pm 10\text{div}</math></p> <p>20 MHz</p> <p><math>\leq 10\text{Hz}</math> (in BNC)</p> <p><math>\pm 5\%</math> if vertical Sensitivity is 1mV/div or 2mV/div</p> <p><math>\pm 4\%</math> if vertical Sensitivity is 5mV/div</p> <p><math>\pm 3\%</math> if vertical Sensitivity is 10mV/div or 20mV/div</p> <p>If vertical displacement is 0 and <math>N \geq 16</math>:</p> <p><math>\pm (5\% \times \text{reading} + 0.1</math> grid+1mV) by selecting 1mV/div or 2mV/div;</p> <p><math>\pm (4\% \times \text{reading} + 0.1</math> grid+1mV) by selecting 5mV/div;</p> <p><math>\pm (3\% \times \text{reading} + 0.1</math> grid+ 1mV) by selecting 10mV/div to 20V/div;</p> <p>if vertical displacement is not 0 and <math>N \geq 16</math>;</p> <p><math>\pm [(3\% \times (\text{reading} -</math> vertical displacement reading) + (1% x vertical displacement reading)] + 0.2div;</p> <p>To add 2mV when setting from 5mV/div to 200mV/div : To add set value by 50mV when setting from 200mV/div to 20V/div;</p> <p>Voltage difference between any 2 points all the waveform after calculating average value for at least 16 captured waveform under the same setup and environment conditions:</p> <p><math>\pm (3\% \times \text{reading}</math> <math>+ 0.05\text{div})</math></p>		
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Band Width	Single Channel	Rise Time
Analog Band Width	Band Width	
100MHz	100MHz	3.5ns
Trigger		
Trigger	≤ 1 div	
Sensitivity		
Trigger level	Internal	± 5div away from screen center
Scope	EXT	± 3V
(Typical) precision of trigger level for signal of which Rise Time or Descend Time is not less than 20ns	Internal	± (0.3div x V/div) (within scope of ± 4div from screen center)
	EXT	± (6% of set Value ± 40mV)
Pre-trigger ability	Normal mode/scanning mode, pre-trigger/delay trigger with adjustable pre-trigger depth	
Inhibition scope (Typical) level set to 50%	80ns-1.5s	Operation if frequency of input signal is not less than 50Hz
Edge Trigger : Ascend, descend, ascend & descend		
Pulse width Trigger		
Trigger mode	To be more than , less than or equivalent to positive/negative pulse width;	
Pulse width scope	20ns - 10s	
Video Trigger*		
Trigger	Internal	Peak value of 2div
Sensitivity		
(typical video trigger)	EXT	400mV
	EXT / 5*	2V
Signal system and row/ field frequency (Video trigger type)	To support standard NTSC and PAL; Scope of row quantity IS 1-525 (NTSC) and 1-625 (PAL)	
CH 1 trigger	Edge, pulse width and video	
CH 2 trigger	Edge, pulse width and video	
Standard Accessories:		
<ul style="list-style-type: none"> <li>• 2 inactive probes of 1.2m and 1:1 (10: 1);</li> <li>• 1 power chord to meet national standards;</li> <li>• 1 "Operation Manual";</li> <li>• 1 "Warranty Certificate";</li> <li>• Communication control software of DSO</li> </ul>		
USB connecting Cables: D05		

13	<b>Bench top Digital Multimeter 4 1/2-digit or above digit</b> <ul style="list-style-type: none"> <li>• Power supply: 220V/ 110V AC</li> <li>• Manual range</li> <li>• 4 1/2-digit large LCD display with back light (displaying range: 75 x 40 mm), max. reading: 19999</li> <li>• Voltage measurement up to 1000VDC and 750V AC</li> <li>• DC,AC current up to 20A</li> <li>• ACV frequency response: 50kHz</li> <li>• Frequency, Resistance, Capacitance measurement, Triode, Diode check and Continuity Test</li> <li>• Overload protection: 250V rms</li> <li>• Operation environment: 0°C-40°C, &lt;75%R.H</li> <li>• Dimension: 260mm x 220mm x 82mm</li> <li>• Weight: approx. 1 kg</li> </ul>	05	
		<b>Total</b>	

**Delivery Mode: FOR VSSUT, Burla**

Total bid price FOR VSSUT Burla {Same as grand total in (f) above} quoted items is Rs. \_\_\_\_\_.

Place \_\_\_\_\_

Date: \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Business Address \_\_\_\_\_

Email \_\_\_\_\_

Contact Number \_\_\_\_\_

Affix Rubber stamp

**Note:-**

1. GST in connection with the items shall be shown separately.
2. The stipulations in Technical Specification will supersede above provisions.
3. The supplier shall keep sufficient stock of spares require during warranty period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of Bidder  
Business Address  
Seal of the Bidder

## ANNEXURE-II

### WARRANTY MAINTENANCE CONTRACT AGREEMENT.

THIS AGREEMENT made on the.....day of ....., 20\_\_ between the "The Registrar, Veer Surendra Sai University of Technology, Burla" (hereinafter "the Purchaser") of the one part and M/s..... (hereinafter called "the Supplier") of the other part:

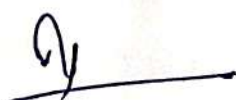
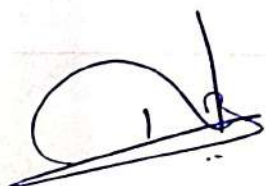
WHEREAS the Purchaser invited bids for certain Goods & ancillary services viz, supply and commissioning of the instruments & equipment at Bhubaneswar including Comprehensive Warranty Maintenance Services and has accepted a bid by the Supplier for the instruments & equipment specified below at the Consignee site including Comprehensive Warranty maintenance Services for a period of 2 (Two) year from the date of installation & commissioning of the instruments & equipment as per award of Contract No..... dated.....

**Name of the Equipment & machineries Qty**

(To be filled in as per details of goods in the award of Contract)

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

1. Maintenance Services shall consist of Preventive and Corrective maintenance of equipment specified above & will include repair and replacement of parts free of cost during the warranty period of the equipment(s).
2. Preventive maintenance, six monthly once, which includes:
  - 2.1 Check-up to ensure that device connection is proper, cabling is at proper condition etc.
  - 2.2 Cleaning of the above instruments & equipments and checking the System Performance.
3. The Supplier is to furnish the tentative schedule of the preventive maintenance of Warranty Maintenance Contract (WMC) to be carried out.
- 4 The parts replaced must be new parts or equivalent in performance to new parts.
5. The Supplier will also provide the same maintenance service in case of the movement of equipment from the place of original installation to a different place or location, if the equipment is shifted by the Purchaser to another place or location at the cost and risk of the purchaser.
6. Any complaint informed through telephone must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification done, that No. will be cancelled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.
7. The maintenance shall normally be done at the earliest.
8. The Service Engineer of the Supplier will be allowed to handle the respective plant & machineries only in presence of the officer in charge at the Consignee site.
9. The Supplier should ensure that maintenance job is not hampered/delayed due to paucity of spares/inadequate manpower etc.
10. The Supplier should submit the services call report, to the Consignee for each and every service call without fail.
11. The Supplier evaluation data format for the WMC of Consignee systems may be filled up for necessary action.
12. All formats after filled up should be signed at the end of each page by the Supplier.



Signature

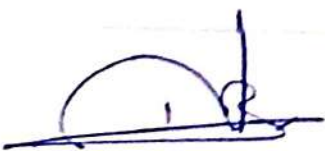
For the Supplier

Name:

Designation:

Address:

Telephone No:

A handwritten signature in blue ink, consisting of a large, rounded loop followed by a vertical stroke and a horizontal line.A handwritten signature in black ink, consisting of a stylized, cursive letter followed by a vertical stroke.

**ANNEXURE-III**

**MANUFACTURES' AUTHORISATION FORM**

No. \_\_\_\_\_ / Date \_\_\_\_\_ /

To

The Registrar,  
VSSUT ,Burla  
Sambalpur,Odisha

Dear Sir, Bid No. \_\_\_\_\_

We \_\_\_\_\_ who are established and reputable manufacturers of \_\_\_\_\_ having factories at \_\_\_\_\_ (Address of Factory) do here by authorize M/s. \_\_\_\_\_ (Name and address of Agent) to submit a bid and sign the contract with you against the above bid.

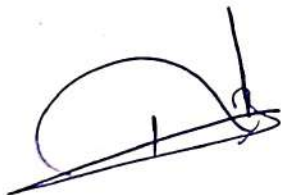
\* No company or firm or individual other than M/s. \_\_\_\_\_ are authorized to bid and conclude the contract in regard to this business against this specific invitation for bid.

We hereby extend our full guaranty and warranty as per general conditions of contract for the goods and services offered by the above firm against this bid.

Yours faithfully,  
(Signature for and on behalf of Manufacturers)

Note: This letter of authority should be on the letter head of the manufacturer and should be signed by a person, competent and having the power of attorney to bind the manufacturer. It should be included original by the Bidders in its bid.

- This Para should be deleted for simple items where manufacturers sell the product through different stockiest.
- The Supplier/Managing Director of the Company (if the supplier is a Company) or the Power of Attorney Holder having specific power to sign the contract can only sign the contract/execute the agreement.



ANNEXURE-IV

**DETAILS OF THE BIDDERS**

Bid Reference No.

Name and address of the Bidder:

01 Name of the bidder

- a) Full postal address
- b) Full address of the premises
- c) Telegraphic address
- d) Telephone number
- e) Fax number
- f) E mail:
- g) PAN No
- h) TIN No

02 Total annual turn-over (value in Rupees)

03 Quality control arrangement details

04 Test certificate held

- a) Type test
- b) BIS/ISO certification
- c) Any other

05 Details of staff

- a) Technical
- b) Skilled
- c) Unskilled

06 Branch Office/ Contact Person/ Liaisoning Office in Odisha.

- a) Address
- b) Telephone No.
- c) e-mail,
- d) Fax

Signature and seal of the Bidder



ANNEXURE-V

Technical details of the equipment/ hardware to be supplied by the bidder

Bid Sl No. of the item	Tender specification	Bidders Specification with make and model no (Enclose manufactures catalogue / brochure for each item)	Deviation if any With university specification



Signature and seal of the Bidder

