

Tender Ref. No: SHR/IEDC/2025-26/001

Date: 15-09-2025

Tender Notice

Sealed/Online tenders are invited from reputed and experienced suppliers, manufacturers, or authorized distributors for the supply, installation, and commissioning of equipment, tools, and machines for setting up an AICTE IDEA Lab at our institute. The laboratory is to be developed as per the AICTE guidelines for promoting innovation, design thinking, and prototyping skills among students and faculty. The detailed specifications of the required items are enclosed with this document.

Sr. No	Equipment	Specifications	Qty
1	3D Printer- FDM	Print Size (L x W x H) (mm):350 x 350 x 350 Open type Printing Speed (mm/s): 500 Nozzle Diameter (mm): 0.4 Filament Compatibility: ABS, ASA, PA, PC, PET, PETG, PLA, PVA, TPU File Transfer: USB drive, Ethernet, Card	2
2	3D Printer- FDM	Print Size (L x W x H) (mm):250 x 250 x 250 Enclosed Type Printing Speed (mm/s): 500 Display Screen: 4.3" color touch screen Nozzle Diameter (mm): 0.4 Filament Compatibility: ABS, ASA, Carbon/Glass Fiber Reinforced Polymer, PA, PC, PET, PETG, PLA, PVA, TPU File Transfer: USB drive, Ethernet, WiFi AMS Needed	1
3	3D Printer- SLA	Product Size : 350*315*H455mm or (13.7*12.4*18in) Package Size : 445*420*550mm or (18*16.5*21.6in) Package Weight : 20kg Printing Volume: 228*128*H245mm Exposure time: 2-3s/layer (0.05mm) Printing Technology: LCD MSLA File Transfer: USB Drive, RJ45 Ethernet Cable, WiFi	1
4	PCB Milling Machine	(Semi-Automatic Machine 300W) Resolution (X/Y) - 3.125 Micro Meter Working Area (X/Y/Z)(mm) - 200x300x120 mm Minimum Width Line & Space in mm - 0.1 (4 mil) Max Travel Speed (mm/sec) - 58 (2.28 “) Drilling (mm) - 0.2 -3.175 (8-125 mil) Maximum Drilling Cycles/ Min - 50 Main Axle Power Rate - 300 W Main Axle Rotating Speed - 25000 RPM Max working speed - 3500mm/min Feeding Height - 120 mm Working drive - 0.02-0.05mm Repositioning accuracy - 0.01-0.02mm	1

Sr. No	Equipment	Specifications	Qty
5	CO ₂ Laser Cutting Machine	<p>Working Area :1300*900* (4*3 feet)</p> <p>Laser Type & capacity: Sealed Co₂ Laser Tube 100-120W</p> <p>Laser Power: -120W</p> <p>Exhaust Systems: Exhaust Blower</p> <p>Motor: DC Stepper Motor with drive unit</p> <p>Cooling Mode: Water Cooling & Protecting System</p> <p>File Format: DXF, PLT, AI, JPEG, TIFF ..etc</p> <p>Material Support:</p> <p>Acrylic/MDF/wood/Cloth/Leather/Paper/Foam</p> <p>Board/Glass/Stone/Plastic</p>	1
6	Vinyl Printer	<p>Dimensions: 50 cm x 15 cm x 15 cm or above</p> <p>Weight: 15.4 lbs. or less</p> <p>Max cut size using machine mat: 11.5-inch x 23.5 inch or more</p> <p>Cut speed: up to 14.1 ips</p> <p>Voltage: 230 V</p> <p>Frequency: 50 Hz</p> <p>Phase: Single-phase</p> <p>Drive Motor: Stepping Motor Max.</p> <p>Cutting Force: 50-500 g</p> <p>Mechanical Resolution: 0.0254 mm/step Blade</p> <p>Type: Super Steel (1.2 mm and 2.0 mm)</p> <p>Display Panel: 8-digit × 2-line LCD</p> <p>Interface:</p> <p>USB Port/SerialPort</p>	1
7	3D Scanner	<p>Technology: Stereo camera, structured light with focusable cameras or equivalent</p> <p>CPU: Quad-core 64-bit SoC, 1.5 GHz with integrated GPU RAM: 4 GB</p> <p>Projector: DLP MEMS mirror or equivalent</p> <p>Camera Sensor: Sony 13 MP or better</p> <p>Scan Speed: 4 seconds or more Working</p> <p>Distance: Effective Working Distance: 160mm-1400mm</p> <p>Scan Speed: 980,000 points/s, up to 14FPS</p> <p>Align Modes: Feature Alignment, Hybrid Alignment, Texture Alignment, Global Markers</p> <p>Safety: Eye-safe</p> <p>Texture Scan: Yes</p> <p>Interface: USB 2.0 or above</p> <p>Outdoor Scanning: Yes</p> <p>Output Formats: OBJ; STL; PLY; P3; 3MF</p> <p>Scanning Environment: Indoor and outdoor (shaded) Texture / Color</p> <p>Scanning: Yes</p> <p>Minimum Capturable Feature Size: 0.2 mm or less</p> <p>Scanner Weight: 500 grams or less</p> <p>Scanner Dimensions: Up to 240 × 60 × 60 mm</p> <p>Compatible OS: Any OS supporting a modern web browser</p>	1

Sr. No	Equipment	Specifications	Qty
8	Lathe Machine cum milling	<p>Centre Width: Up to 400 mm or better Height of Centers: Up to 88 mm Maximum Work piece Diameter: Up to 100 mm Machine Base: Cross-ribbed surface, high-quality cast iron with ground prismatic guide, capable of fitting milling/drilling attachment Spindle: Supported with adjustable taper roller bearings Spindle Receiver: MK3 or compatible Spindle Drill Hole: Up to 22 mm or better Spindle Concentricity: Up to 5 microns or better Chuck: 3-jaw chuck as per DIN 6386, centrally clamped, 100 mm diameter or better Run Out (without Chuck): Up to 10 microns Sleeve Receiver: MK2, retractable sleeve with scale Spindle Speed Range: Between 50 to 2500 rpm Speed Stages: 6-8 Motor Rating: 550W or better, induction motor, single phase 230V Traverse Cross: Up to 70 mm or better Traverse Longitudinal: Up to 300 mm or better Weight (Complete): Up to 55 kg or more Additional Accessories: Splash guard and chip collecting tray: 1 No. Cutter set with tungsten inserts: 2 Nos. Milling Attachment: 1 No. Tungsten disposable tips ten-piece set: 1 No. Sample workpieces (Nylon Rod, Aluminum Rod) Desktop: 1 No.</p>	1
9	CNC Router	<p>X-1300* Y-2500* Z-200MM, Variable Rpm 8000 to 50000rpm, 6.5 KW Motor Max Speed 25-35m/min Max. Working speed 10-20m/min Cut or engrave All Type of Wood ,MDF ,Acrylic ,ACP ,WPC ,PVC , Marbel ,Granite , stone , Glass , Aluminium , copper Etc. Machine Accuracy 0.025mm Additional requirement of assortment of tool bits for various operations</p>	1
10	Belt and Disc Sanding Machine	<p>Motor: 230V 50Hz Power: 380W S2 30min No-load Speed: 1450 rpm or more Belt Size: 100 x 914 mm or less Disc Size: 150mm or better Table Tilting Range: 0°-45° Belt Tilting Range: 0°-90° Table Size: up to 190 x 125 mm</p>	1
11	Scroll Saw	<p>Power input: 50 Watt Thickness of Cut: 50 mm (2 inch) Throat: 406 mm (16 inch) Length of Stroke: 18 mm (11/16 inch) Strokes Per Minute: 400-1,600 SPM Overall Length: 600 mm (23-5/8 inch)</p>	1
12	Wood Turning Lathe	<p>Motor: 230V~50Hz, 550W, S2: 15min or above Max. Disc Diameter: min 75 mm Max. Cutting Length: 450 mm or more Spindle Speed: 5 speeds such as 1600 / 2600 / 3200 RPM etc. Material: Cast Iron Bed Height: 0.2 m Cable Length: 0.850 m</p>	1

Sr. No	Equipment	Specifications	Qty
13	Bench Top Drill Machine	Continuous rating input: Max. 250 W Capacity: Steel: Min 13 mm (1/2") Wood: Min 24 mm (15/16") No Load Speed (RPM): 570, 890, 1,300, 1,900, 2,670(50 Hz), 690, 1,070, 1,560, 2,280, 3,200(60 Hz) Net weight: Max. 20 kg (44.1 lbs.) Power supply cord: 1.75 m (5.7 ft) Additional Accessories: Bench Vise: 1 No., Drill Bit Set 10 Pcs: 1 No	1
14	Portable Welding Machine	Welding Current (at 40°C, 10 min cycle): 120A @ 100%, 150A @ 60%, 200A @ 35% Supply Voltage: 240V +10%, -15%, 1 Phase, 50/60 Hz Open Circuit Voltage: 55V DC ±5V Welding Current Range: 15200 Amps DC Insulation Class: F Type Ingress Protection: IP21 Dimensions (L×W×H) with Handle: Up to 320×120×195 mm Weight (Approx.): 4.3 kg or less	1
15	Computerized Sewing Machine	Motor: 120 W Max Sewing Speed: 860 SPM Power: 220 - 240 V Automation Grade: Automatic Max Stitch Length: 4mm Thread Type: Computerized Weight:7.6 kg Number of Stitches:120 Size/Dimension: 50.8 cm x 29.464 cm x 40.64 cm Maximum Stitch Width: 7 mm Number of Buttonhole Styles: 7 LCD Screen Display: Yes	1
16	Filament Dehydrator	Operating Temperature Range: Min 45°C– 70°C Drying Time Setting: 0– 48 hours or higher Hot-Air Heating: Up to 360° Circulation Moving Speed: 300 mm/s or more Power Rating: 160 W Shipping Weight: 2.5 kg	1
17	Reflow Oven	No. of Waves: 7 or higher Heating Type: Infrared IC Heater Max. PCB Width: 300×320 mm or more Power Supply: AC 220V / 50Hz Peak Power: 1500W Cycle Time: 1–8 min or less Temperature Range: 0°C–280°C Overall Dimensions: min 350×450 mm Machine Weight: Up to 25 kg	1

Sr. No	Equipment	Specifications	Qty
19	MSO 100 MHz	Bandwidth: Up to 100 MHz Analog Channels: 4 or more Real-Time Sampling Rate: Maximum 1 GSa/s per channel Memory Depth: 10 Mpts per channel Waveform Update Rate: Approximately 120,000 wfms/s Vertical Resolution: 8 bits Vertical Scale: Ranging from 1 mV/div to 10 V/div Horizontal Scale: Spanning 1 ns/div to 100 s/div Spectrum Analyzer Frequency Range: DC to 500 MHz FFT Points: Up to 1M points for enhanced frequency domain resolution Waveform Math Functions: Includes addition, subtraction, multiplication, division, minimum, maximum, root, square, absolute, inverse, derivative, integral, and low-pass filter Trigger Types: Edge, Pulse Width, Video, Pulse Runt, Rise & Fall(slope), Alternate,	1
20	Digital oscilloscope	Number of Channels: Up to 2 independent analog inputs Memory Record Length: Up to 10 Mpts for extended waveform capture Bandwidth Limiting: Selectable 20 MHz bandwidth filter Sampling Rate: Maximum of 1 GSa/s real-time equivalent per channel Rise Time: ≤ 3.5 ns, depending on probe and settings Display: 7" TFT color LCD with 800×480 resolution Time Base Range: From 5 ns/div to 100 s/div, user-adjustable Vertical Resolution: 8-bit digital resolution Trigger Modes: Automatic, Normal, and Signal-dependent triggering Maximum Input Voltage: 300 Vrms (within safety limits) Input Sensitivity: Within the range of 1 mV/div to 10 V/div Input Coupling Options: Selectable among AC, DC, and Ground Trigger Coupling Modes: Configurable as AC, DC, High-pass, or Low-pass Physical Dimensions:	1
21	Function Generator	peak-to-peak (V_p -p) into a 50 Ω load. Amplitude Accuracy: Amplitude accuracy shall be within $\pm 20\%$ at the maximum amplitude setting. Output Impedance: Nominal output impedance shall be 50 Ω with a tolerance of $\pm 10\%$. Attenuator: A single-step attenuator of -40 dB ± 1 dB shall be provided. Display: A 6-digit LED display shall be incorporated for parameter indication. Output Control: Output shall be controlled via an ON/OFF selector switch. Power Source: The device shall operate on an AC supply of 240 V, 220 V, or 110 V $\pm 10\%$, with frequency 50/60 Hz..	1
22	Non-Contact Voltage Tester	Function: Non-contact AC voltage detection tester. Voltage Detection Range: Approximately 90 V to 1000 V AC. Detection Method: Capacitive, with visual and audible indication. Sensitivity: Adjustable sensitivity for different voltage ranges. Response Time: Instantaneous detection within standard operating conditions. Indicators: Bright LED indicators and an audible beep for voltage presence. Operating Environment: Suitable for use in ambient temperatures from 0 °C to 40 °C. Power Source: Powered by standard batteries (typically 2 × AAA or equivalent). Safety Standards: Complies with IEC/EN 61010-1 CAT III 1000 V	5

Sr. No	Equipment	Specifications	Qty
23	LCR Meter	<p>Display: Approximately 2.8" TFT touch LCD screen.</p> <p>Resolution: 25,000 or above counts resolution on both primary and secondary displays.</p> <p>Basic Accuracy: Within $\pm 0.2\%$ under standard conditions.</p> <p>Test Frequencies: Six or eight selectable frequencies depending on model variant.</p> <p>Measurement Combinations: Up to 15 different measurement combinations available.</p> <p>Test Level: Selectable AC test levels approximately 0.3 V, 0.7 V, and 1 V rms; DC test level selectable at ± 1 V.</p> <p>Measurement Speed: Selectable measurement speeds of approximately 10 measurements per second (fast) and 2.5 measurements per second (slow).</p> <p>Auto LCR Mode: Automatic identification and measurement of component types within supported ranges.</p> <p>Data Hold: Feature available to hold measured data on display. Interface: USB virtual COM port provided for remote communication capabilities.</p> <p>Software: Data logging software is available for data capture and analysis.</p>	1
24	Digital Microscope	<p>Specification: Magnification: 1600X Light source: 8 LED lights</p> <p>Resolution: 1920x1080, 640x480 Pixel: 30W Focal length: 3-40mm manual adjustment.</p> <p>Support Android 4.2 or above/Windows/Mac systems</p>	1
25	Hand Drill Machine	<p>Rated Input Power: Approximately 500 W or above, maximum power consumption.</p> <p>Bit Holder: Standard 1/2"-20 UNF thread type.</p> <p>No-Load Speed (1st Gear): Adjustable from 0 up to approximately 3,000 rpm.</p> <p>Power Output: Approximately 300 W continuous output power. Weight: Approximately 1.7 kg total device weight.</p> <p>Impact Rate at No-Load Speed: Variable from 0 up to approximately 48,000 bpm.</p> <p>Rated Torque: Approximately 1.4 Nm maximum torque output. Drill Spindle Connecting Thread: Standard 1/2"-20 UNF thread. Chuck Capacity (Min/Max): Approximately 1.5 mm minimum to 13 mm maximum.</p>	2
26	Jig Saw	<p>Rated Input Power: Approximately 500 W maximum power consumption.</p> <p>Voltage, Electrical: Nominal 230 V AC supply.</p> <p>Saw Stroke Length: Approximately 20 mm stroke length.</p> <p>Stroke Rate at No Load: Adjustable within approximately 800 to 3,100 spm (strokes per minute).</p>	1
27	Miter Saw	<p>Rated Input Power: Approximately 1,750W maximum power consumption.</p> <p>Saw Blade Diameter: Approximately 254 mm nominal diameter. Mitre Setting: Adjustable up to approximately 47° left and 52° right. Bevel Setting: Adjustable up to approximately 45° left and 0° right. Saw Blade Bore Diameter: Approximately 25.4 mm standard bore.</p> <p>Cutting Capacity at 0°: Approximately 90 mm x 130 mm maximum</p>	1

Sr. No	Equipment	Specifications	Qty
28	Hot Air Gun	Rated Input Power: Approximately 1,800 W maximum power consumption. Voltage, Electrical: Nominal 230 V AC supply. Weight: Approximately 0.75 kg. Working Temperature Range: Adjustable within approximately 60 °C to 550 °C. Heat-Up Time: Approximately 1 second to reach target temperature. Airflow: Adjustable within approximately 350 to 550 liters per minute. Airflow Control: Three selectable airflow settings.	2
29	Bench grinder	Grinding wheel diameter: min 150 mm Rated input power: 350 W or more Grinding wheel widths: 20 mm or more No-load speed: Up to 3,000 rpm Grinding wheel bore: 20 mm/2cm Grit 24, 60 or more Weight: 10 kg or less	1
30	Angle Grinder	Rated Input Power: Approximately 670 W maximum power consumption. No-Load Speed: Approximately 11,000 rpm. Disc Diameter: Approximately 100 mm nominal diameter. Grinding Spindle Thread: Standard M10 thread. Weight: Approximately 1.5 kg. Switch: Lockable switch for operational safety.	1
31	Straight Grinder	Rated Input Power: Max 300 W power consumption. No-Load Speed: Up to 28,000 rpm. Voltage, Electrical: Nominal 230 V AC supply. Spindle Collar Diameter: Approximately 41 mm. Weight: Around 1.4 kg. Maximum Grinding Tool Diameter: Up to 25 mm. Maximum Collet Diameter: Up to 8 mm. Switch: Lockable switch for enhanced safety.	1
32	Circular Saw	Rated Input Power: Approximately 1,400 W maximum consumption. Saw Blade Diameter: Nominal 184 mm diameter. Saw Blade Bore Diameter: About 20 mm standard bore size. Guide Rail Compatibility: Not compatible with guide rails. No-Load Speed: Typically, 5,200 rpm. Weight: Around 4.1 kg	1
33	Blower	Rated Input Power: Max 650 W power consumption. Weight: Approximately 1.7 kg. Voltage, Electrical: Nominal 230 V AC supply. Sound Pressure Level: Around 103 dB(A). Sound Power Level: Approximately 95 dB(A). Uncertainty (K): Within ±3 dB	1
34	Cordless Screwdriver	Battery Capacity: Around 1.5 Ah nominal capacity. Torque (Soft/Hard/Max): Approximately 14 Nm / 30 Nm / Maximum not specified. No-Load Speed (1st Gear / 2nd Gear): Ranges from 0 up to 400 rpm and 0 up to 1,500 rpm respectively. Battery Type: Rechargeable Lithium-Ion battery. Chuck Capacity (Min/Max): From approximately 0.8 mm up to 10 mm. Weight (Excluding Battery): About 0.8 kg. Torque Settings: 20 plus 1 adjustable setting.	1

Sr. No	Equipment	Specifications	Qty
35	Vacuum Cleaner	Rated Input Power: Approximately 1,100 W maximum power consumption. Weight: Around 6 kg total weight. Container Volume (Net): Approximately 10 liters capacity. Voltage, Electrical: Nominal 230 V AC supply. Container Volume (Gross): Approximately 15 liters total volume. Container Volume (Net, Water): About 8 liters of capacity for water. Filter Surface Area: Around 2,300 cm ² effective filtration area. Airflow Rate (Turbine): Approximately 53 liters per second. Vacuum Pressure (Turbine): Up to 270 mbar vacuum pressure. Number of Wheels: Four wheels for mobility.	1
36	Random orbit sander	Rated Input Power: Up to 280 W maximum consumption. Sanding Pad Diameter: Nominal 125 mm diameter. Orbit Diameter: Approximately 2.6 mm orbital diameter. Weight: Around 1.4 kg. No-Load Speed: Adjustable within a 7,500 to 12,000 rpm range. Orbital Stroke Rate: Between 15,000 and 24,000 orbits per minute (opm). Eccentricity: Approximately 1.3 mm.	1
37	Planer	Rated Input Power: Not exceeding 710 W under nominal operating conditions. Planer Width: Approximately 82 mm effective width capacity. Planer Depth: Within the range of up to 2.6 mm maximum depth per pass. Weight: Circa 2.8 kg total unit mass. Adjustable Rebating Depth: Maximum adjustable depth of approximately 9 mm. No-Load Speed: Operating speed is typically around 18,000 rpm.	1
38	Cordless Vacuum Cleaner with Starter Kit	Battery Voltage: Rated at approximately 18.0 V nominal voltage. Weight Excluding Battery: Around 1.3 kg without battery attached. Container Volume: Approximately 0.7 liters net capacity. Filter Surface Area: Roughly 55 cm ² filtration surface. Maximum Airflow Rate (Turbine): Up to 10 liters per second. Maximum Vacuum Pressure (Turbine): Not exceeding 60 mbar under standard conditions. Operating Time (18 V Battery): Typically, 7 minutes per Ah of battery capacity.	1
39	Rotary Tool Kit	Rated Power Input: Approximately 175 W within the nominal voltage range. Voltage: Operates within a 220 to 240 V AC supply. Weight: Around 0.66 kg total mass. Length: Approximately 24 cm overall length.	2
40	Rubber Grip Hacksaw	Depth of Throat: Approximately 98 mm (3.85 inches) nominal depth. Blade Length: Approximately 10 inches nominal length.	2
41	Hacksaw Mini	Handle Material: Constructed from metal as standard. Overall Length: Around 11 inches total length.	2
42	Claw Hammer Steel Shaft	Weight: Approximately 8 oz (220 grams) nominal weight. Dimensions: Around 27.8 cm × 12.4 cm × 3.6 cm (L × W × H) overall size	2
Sr. No	Equipment	Specifications	Qty

43	Ball Pein Hammer	Weight: Approximately 110 grams nominal weight. Dimensions: Around 32.6 cm × 10 cm × 2 cm (L × W × H) overall measurements. Weight: Approximately 450 grams nominal weight.	2
44	Rubber mallet	Dimensions: Around 33.6 cm × 9.6 cm × 6.2 cm (L × W × H) overall size.	2
45	Ring spanner set 12Pcs	Weight: 3.08 Kg nominal weight. Quantity: 12 pcs per set. Size: 6 mm to 32 mm overall range.	1
46	Open-end spanner set 12Pcs	Weight: Approx 1.74Kg nom.wt Qty: 12pcs/set. Size: 6mm-32mm overall dims.	1
47	Combination Spanner set 8Pcs	Weight: Approx 649g nom.wt Qty: 8pcs/set.	1
48	Allen key set 10pcs	Hex Key Size: 1.5,2,2.5,3,4,5,5.5,6,8,10mm; Qty:10pcs/set	2
49	Allen key set 12pcs	BallKeySize:1/16",5/64",3/32",7/64",1/8",9/64",5/32",3/16",7/32",1/4",5/16",3/8" Qty:12pcs/set	2
50	Combination plier	Weight: Approx 422g nom. wt Size: 8"/200mm nominal	2
51	Long nose plier	Weight: Approx 399g nom. wt Size:180mm/6" nominal	2
52	Circlip straight 5"	Weight: Approx 399g nom. wt Size:130mm/5" nominal	2
53	Circlip bent	Weight: Approx 399g nom. wt Size: 130mm/5" nominal	2
54	Diagonal Cutter	Weight: Approx 239g no Size:180mm nominal"	2
55	Wire Stripper	Weight: Approx 281g no Size:130mm nominal	2
56	Adjustable spanner	Size: Up to 150 mm	2
57	Pipe wrench	Size: Max 300 mm	2
58	C – clamp	Size: Up to 75 mm	4
59	C-clamp	Size: Up to 150 mm	4
60	Snap- off Knife	Size:18 mm	2
61	16pcs screw driver set	Pieces Per Set: 16 pcs	5
62	6pcs precision screw driver set	Pieces Per Set: 16 pcs	5
63	Max steel snip cutter	Length: 250 mm	2
64	PVC Pipe cutter	Length: 42 mm	2
65	Hot Glue Gun	Power: 40 W	4
66	Big file set	Length: 200 mm	2
67	Chisel set	Weight: 340 gm	2
68	Punch set	Weight: 390 gm	2
69	Bench wise	Base Type: Fixed Size:2–3½" nominal JawWidth:60mm	2
70	Router Bit Starter Kit	Pieces Per Set: 15 pcs WAF (mm):1,1.5,2,2.5,3,3.5,4,4.5,5,5.5,6,6.5,7,7.5,8,8.5,9,9.5,10,10.5,	1
Sr. No	Equipment	Specifications	Qty
71	Drill bit set	11,11.5,12,12.5,13 Wt.: ~1.3Kg nom. wt	2

		Sz(mm):205×115×55 overall Vice Type: Bench	
72	Baby wise	Size: 2" nominal Jaw Width: 50mm , Vice Type: Bench	2
73	Ratchet Set	Size:2" nominal;Jaw:50mm	2
74	Pegboard	Very Good Quality	5
75	Digital Vernier Caliper	Product Type: Digital CalliperMeas.Range:0 -150mm/0- 6"Resolution:0.01mm	2
76	Micrometer	Resolution:0.001mm/0.00005" Meas.Range:0-25mm/0-1"	
77	Steel Rule 300mm	Product Type: Steel Rule Scale Size:12"/300mm Material: Stainless Steel	
78	Steel Rule 600mm	Product Type: Steel Rule ScaleSize:24"/600mm Material: Stainless Steel	
79	Engineering Square	Size:150 × 80 mm nominal Material: Carbon Steel	
80	Meter Tape 30m	Length: 30 m	
81	Measuring Tape 3M	Length: 3 m	
82	Measuring Tape 5M	Length: 5 m	
83	Spirit Level	Vials: 3 Accuracy: 0.5mm/m Length: 300 mm Product Type: Level	
84	Goggle	Goggle – Industrial Standard Make	
85	Apron	Apron - Standard Make	
86	Ear Muff	Earmuff – Industrial Standard Make	
87	Mask	Mask – Industrial Standard Make	
88	Fire Extinguisher	Fire Extinguisher– Industrial Standard Make	
89	First Aid Kit	First Aid Kit – Industrial Standard Make	
90	Gloves Pair	Gloves – Industrial Standard Make	
91	Normal Oven	Oven Cap: 20L or more Type: Solo Door: Side Swing Child Lock: Yes Completion Beeper: Yes Power Levels: Up to 5 Control: Membrane Type Cavity Mat: Anti-Bacterial	
92	Refrigerator	Capacity:183L or more Annual Energy Consumption: 148kWh/Year or less Refrigerator Fresh Food Capacity: 165L or more Freezer Capacity: min 18L Bottle Count: 5 or more Noise Level:40dB or less Installation Type: Free- standing	1
Sr. No	Equipment	Specifications	Qty
93	Smart Board	Display Size: Approx 75Inch (190 cm) Up to Resolution: 4K UHD or higher Brightness: Min 350 nits; Typ 400 nits Approx	1

		<p>Contrast Ratio: Typ 1200:1 Upto</p> <p>Response Time: Approx 8ms</p> <p>Viewing Angle: Approx 178 Degrees Wide</p> <p>Working Frequency: 1.5GHz Nominal RAM: 4 GB or More Internal Storage: 32 GB</p> <p>Min OS: Android-based</p> <p>HDMI: 3 Ports USB: 2 Ports</p> <p>Sensing Type: Infrared Touch Frame</p> <p>Surface Protection: 4mm Toughened Glass or Equivalent</p> <p>Infrared Touch Points: 20 Approx</p> <p>Voltage: DC +5V ±5% Range</p> <p>OPS: Optional</p>	
94	Projector	<p>Projection Tech: RGB liquid crystal shutter projection (3LCD) Up to</p> <p>Connectivity: USB Type B: 1 Port (Firmware Update/Copy OSD)</p> <p>Approx Analog Input: D-Sub 15pin: 1 Port</p> <p>Digital Input: HDMI: 1 Port</p> <p>Projection Lens: Type: No Optical Zoom/Focus (Manual) Nominal</p> <p>Focal Length: 16.70 mm Approx</p> <p>FNumber: 1.44 Nominal</p> <p>Zoom: 1.44 – 1.95 Ratio (Wide to Tele)</p> <p>Throw Ratio Range: 1.00 – 1.35 (Digital Zoom Approx)</p>	1
95	Printer	<p>Functions: Print, Scan,</p> <p>Copy Printer Type: Laser Nominal</p> <p>Dims(mm): 409 × 398.5 × 267</p> <p>Approx Weight: 9.7 Kg Nominal Print Speed: Up to 30 ppm(A4 Size)</p> <p>Approx Warranty: 1 Year On-Site</p> <p>Print Resolution: 600 × 600dpi, HQ1200(2400 × 600dpi) Quality</p> <p>Approx 2 Sided-Duplex</p> <p>Paper Type: Plain, Thin, Recycled, Approx 2 Sided-Duplex</p> <p>Paper Size: A4</p> <p>Paper Handling: Tray #1</p> <p>Paper Type: Plain, Thin, Recycled Tray #1</p> <p>Max Capacity: Up to 250 Sheets(80g/m²)</p> <p>Approx Paper Output: Up to 100 Sheets(80g/m²) Face Down Tray; One Sheet Face Up Tray Approx Copy-Color /Mono: Yes/Yes</p> <p>Multiple</p> <p>Copies: Sorts/Stacks Upto 99 Pages Approx Enlarge/Reduce: 25% 400% (In 1% Steps)</p> <p>Approx Copy Resolution: 600 × 600dpi 2 Sided-Duplex Copy Paper Type: Plain, Thin, Recycled 2-sided-Duplex Copy Paper Size: A4 Scan</p> <p>Resolution Interpolated: Up to 19200 × 19200 dpi Approx-Scan</p> <p>Resolution Glass: Up to 600 × 2400 dpi Approx</p> <p>Connectivity: Hi-Speed USB 2.0</p> <p>Display Type: 16 Chars × 2 Lines</p> <p>Memory Capacity: 32MB Approx</p> <p>Power Source: 220 - 240 VAC 50/60Hz Power Consumption-Ready: sleep:</p>	1
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96	Desktop	<p>CPU: INTEL CORE i7-13th Gen or Higher</p> <p>RAM: 16 GB + 512 GB SSD or more</p> <p>Conn: LAN + WIFI + BLUETOOTH + KEYMOUSE Display: 21"</p> <p>DESKTOP MONITOR</p>	5

97	3D printer Filament	Weight Kg: 1 Approx Melt Flow Index: 2 (190°C/2.16kg) Nominal Filament Length: 330 m Approx Dim Accuracy: +/-0.1 mm Approx Roundness Accuracy: +/-0.5 mm Approx Spool Inner Dia: 55 mm Nominal Spool Outer Dia: 20 mm Approx Spool Weight: 300 g Nominal Spool Width: 65 mm Approx	10
98	Acrylic Sheet 3mm, 4ft x 4ft		20
99	Acrylic Sheet 4mm, 4ft x 4ft		20
100	Acrylic Sheet 5mm, 4ft x 4ft		20
101	Foam Sheet 8mm, 4ft x 4ft		2
102	Foam Sheet 10mm, 4ft x 4ft		1
103	Foam Sheet 12mm, 4ft x 4ft		1
104	Foam Sheet 15mm, 4ft x 4ft		1
105	Ply Board 5mm, 2ft x 4ft		12
106	Nuts (3mm,4mm, 5mm,6mm,8m m, 10mm,		1
107	Bolts (3mm,4mm, 5mm, 6mm,8mm, 10mm, 12mm) Dia 1" Inch Pack of 100		1
108	Screws (3mm, 4mm, 5mm) Pack of 100		1
109	Washers (3mm,4mm, 5mm, 6mm, 8mm, 10mm, 12mm) Pack of 100		1
110	Studs (6mm,8mm) 1 Meter		2
111	Nails (1",2",3",1.5",5") Pack of 100		1
Sr. No	Equipment	Specifications	Qty
112	Fevicol 2Kg		1
113	2 Way Tape		10
114	PVC Pipe .75", 10ft		10
115	PVC Pipe 1", 10ft		10
116	PVC Pipe 1.5", 10ft		10

117	PVC Pipe 2.0", 10ft		10
118	Aluminum channels (L, C, Box, strip length 12 ft)		
119	PCB Drill Bit 0.4mm		10
120	PCB Drill Bit 0.8mm		10
121	PCB Drill Bit 1mm		10
122	Drill Bit 4mm		10
123	Drill Bit 5mm		10
124	Drill Bit 6mm		10
125	Arduino UNO R3		5
126	Arduino NANO		5
127	ESP Wi-Fi Camera		5
128	Raspberry Pi Model 4B, 4GB		3
129	ESP8266 Node MCU		2
130	ESP32 Development Board		2
131	Beagle bone blue		1
132	Beaglebone Black		1
133	Voltage Regulator Module		5
134	Mini Micro submersible Water Pump		2
135	Piezoelectric Plate		2
136	8*8 LED Matrix Module		2
137	Bluetooth		2
138	7-Segment LED Display		2
139	GSM/GPRS/GPS Module		2
140	Laser Module		2
141	LDR Module		2
142	4*4 Matrix Keypad		2
143	Joy Stick Module		2
144	Active Buzzer (BIG)		2
145	Active Buzzer (SMALL)		2
146	Motor Driver		2
147	Sound Playback Module		2
Sr. No	Equipment	Specifications	Qty
148	BO Motors		2
149	Vibrating Motor		2
150	Capacitive Touch Switch		2
151	IR Sensors Obstacle Sensors)		2

152	Triple Axis Magnetometer		2
153	Humidity Sensor		2
154	MQ-2		2
155	MQ-3		2
156	MQ-4		2
157	MQ-5		2
158	MQ-7		2
159	Ultrasonic Sensor Module		2
160	Triple Axis accelerometer		2
161	PIR Motion Detector Module		2
162	Pulse Rate Heart Sensor		2
163	Relay Module		5
164	Soil Moisture Sensor		2
165	VTouch Sensor		2
166	Rain Drop Sensor		2
167	Flex Sensor		2
168	Temperature Sensor		2
169	Force Pressure Sensor		2
170	Color Recognition Sensor		2
171	Water Flow Sensor		2
172	Sound Sensor		2
173	IR Sensor Array for Line Following		2
174	RFID Reader-Tags		2
175	RF Modules Tx & Rx 315 MHz ASK		2
176	Stepper motor with Driver Board		2
177	Servo Motor 360 rotation		10
178	Servo Motor 180 rotation		10
179	Metal Gear Servo Motor (180°Rotation)		10
180	Solder Wire 100grm		10
Sr. No	Equipment	Specifications	Qty
181	Solder Flux		10
182	830 Points Solderless Breadboard		5
183	400 Points Solderless Breadboard		5
184	Copper Clad Board single side		10

185	Copper-clad board double-sided	10
186	Male to Male Breadboard Jumper	100
187	Female to Female Breadboard Jumper	100
188	Male to Female Breadboard Jumper	100
189	Push Button Switch	20

Terms and Conditions

The following Terms and Conditions apply to all bidders participating in the tender for the supply, installation, and commissioning of equipment, tools, and machines for the establishment of an AICTE IDEA Lab. All prospective vendors are required to read and comply with these terms in their entirety.

1. General Information

All equipment and materials must be delivered in the quantities and specifications as mentioned in the purchase order issued by the purchaser. The delivery location Sahrdaya College of Engineering & technology, Kodakara, Thrissur – 680684 will be specified in the purchase order. The entire contract shall remain valid for a period of three (3) months from the date of award.

Quotations submitted by bidders must remain valid for a minimum of 90 days from the final date of submission. Any quotation that does not meet this validity period will be considered non-compliant.

2. Bid Submission Guidelines

Bids may be submitted either via email (digitally signed) or in hard copy form, as specifically mentioned in the tender notice. All quotations must be printed on the bidder's official letterhead and duly signed by an authorized representative.

Each bid must be complete in all respects and must include the following mandatory documents:

- Detailed Profile of the Bidder, highlighting experience and key competencies.
- Copy of the Company/Firm Registration Certificate.
- Copy of valid GST Registration Certificate.
- Copies of Work Completion or Experience Certificates of similar completed works.
- Genuine Manufacturer Authorization Form (MAF), which will be subject to verification with the respective OEM.
- Bidder should provide an Escalation Matrix for service and after sales support.
- Complete, signed, and stamped tender document including amendments and deviation sheets, if any (to be uploaded online only).
- Any other documents in support of technical eligibility.

3. Technical Documentation and Compliance

The bidder must furnish complete technical documentation for each quoted item. This includes detailed product specifications, installation manuals, operation and maintenance manuals. The bidder is also required to submit a layout/design proposal aligned with the lab setup requirements, highlighting compliance points against the tender specifications.



Original technical brochures or scanned versions of product catalogs should be submitted with the bid. Wherever available, URLs to the OEM's official product page should also be provided for cross- verification.

Each bidder must clearly mention the make, model, and complete technical specifications for the equipment being offered. A compliance sheet responding to each technical requirement outlined in the tender must be prepared and duly signed.

4. Financial Criteria

Prices quoted must be inclusive of all taxes (GST, customs, etc.), transportation, packaging, insurance, unloading, and installation, commissioning, and training charges. There shall be no extra claim under any circumstances after the finalization of the bid.

The quoted prices must be firm and fixed throughout the duration of the contract. No escalation in price will be allowed under any pretext.

5. Evaluation and Award of Contract

All bids will be evaluated based on compliance with the technical specifications, completeness of submitted documentation, financial eligibility, and price competitiveness. The contract shall be awarded to the bidder whose offer is determined to be technically responsive and lowest in cost.

The purchaser reserves the absolute right to reject any or all bids without assigning any reason. The final decision on selection will be at the sole discretion of the purchaser and shall be binding on all parties.

6. Warranty and After-Sales Service

All equipment must carry a minimum onsite warranty of at least **three years** from the date of successful installation and commissioning. During this warranty period, the bidder shall repair or replace any defective items at no additional cost to the purchaser. All associated transportation, testing, and labor costs shall be borne by the bidder.

In case of any service delay or failure to resolve issues during the warranty period, the purchaser reserves the right to invoke penalties or reject future business from the vendor.

7. Payment Terms

Payment shall be released only after the successful supply, installation, and commissioning of the equipment. Final inspection and acceptance will be carried out by the purchaser's technical committee.

No payment shall be made for equipment that is received in damaged condition, is non-functional, or fails to meet the required specifications. The bidder must submit all necessary documentation (delivery challans, installation report, warranty documents, training certificate, invoice, etc.) to process payment.

8. Submission Deadline and Contact Details

All quotations must be submitted by **September 31, 2025, before 5.00pm** to the email:

principal@sahrdaya.ac.in or sent in hard copy to:

Sahrdaya College of Engineering and Technology,
PB NO 17, College Rd, Kodakara, Kerala 680684