



VAAGESWARI COLLEGE OF ENGINEERING

(Sponsored by SREE VAAGESWARI EDUCATIONAL SOCIETY)

UGC AUTONOMOUS

Accredited by NAAC with A+ Grade and ISO 9001:2015 Certified
Approved by AICTE New Delhi, and Affiliated to JNTUH and recognized by Govt. of Telangana



Tender Ref. No: VGSE/S4/AICTE IDEA LAB/ 2080/A

Date: 01.09.2025

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.

List of Equipments with Specifications for AICTE IDEA Lab

Sr. No.	Equipment	Preferred brands if any	Specifications	Qty
1	CO ₂ Laser Cutting machine	Branded Company Product with at least three years product warranty	Cutting Area: 1220 x 915 mm (4 x 3 ft.); Laser Power: 100 Watt; Stepper Motor; Max Cutting Thickness: 20 mm Acrylic; Travelling Speed: 0.1 to 600 mm/s; Reposition Accuracy: 0.02 mm; Min Letter Size: 1 mm; Belt Transmission; Manual Z-Axis; Power Adjustment: 1 to 100%; OS: Windows 7 (32-bit); Interface: USB, Udisk, Ethercad; Formats: PLT, DXF, BMP, JPG, AI, DWG, GIF, HPGL; Memory Buffer: 128 MB; Voltage: 220V/50 Hz; Environment: 45°C, 5%-80% Humidity	1
2	Vinyl Cutter	Branded Company Product with at least three years product warranty	Working width -2 feet with desktop Computer & UPS Printing Speed: 19.69 in/s (500 mm/s) (all directions) Product description: Desktop cutter / vinyl cutter Power: AC 100 to 240 V +-10 % 50/60 Hz 1.7 A Dimensions: 33.5 in (W) x 12.2, Bed size: 2 to 3 feet	1
3	3D Printer with single nozzle	Branded company Product with at least three years of product warranty	3D printer featuring a 218×122×250 mm build volume, 6.6" 4K mono panel (35 µm XY, 10 µm Z resolution), 405 nm COB LED light, CNC precision Z-axis, metal-acrylic body, 7" HD touchscreen, USB/Ethernet input, Chitubox software, and U3DS OS L1.01	1
4	3D Scanner	Branded company Product with at least three years product warranty	3D scanner with a 5×5×5 mm to 930×580×1000 mm scan volume, 0.02 mm accuracy, 60-second scan speed, LED light source, USB-C connectivity, Windows/macOS compatibility	1
5	CNC Router	Branded company Product with at least three years product warranty	Machining Area: 1300 x 2500 x 200 mm; Spindle: 3.0 - 6.0 KW Air Cooled (Hiteco, Italy); Spindle RPM: 18000 max; Transmission: Helical Rack & Pinion with Gear Box; Operating System: Handheld	1

			Controller; Tool Diameter: Ø3 to Ø16 mm; Driving System: AC Servo Motor (Leadshine); Max Speed: 30 m/min; Power Supply: AC 420V/3PH; Weight: 970 kg, Bed size: 2 to 3 feet	
6	Lathe Machine cum milling	Branded company Product with at least three years product warranty	400 mm center distance, 100–3000 rpm spindle speed, 0.01mm precision, variable speed motor, and manual/automatic feed , Speed Stages: 6-8 Motor Rating: 550W or better, induction motor, single phase 230V , Traverse Cross: Up to 70 mm or better	1
7	Drilling M/c	Branded Company Product with at least three years product warranty	1 HP Motor, Pillar type	1
8	Handheld High Speed Drilling M/c		15000 RPM with accessories	2
9	Benchtop Grinder Machine	Branded Company Product with at least three years product warranty	Power: 600 W, Speed: 3000–3600 RPM, Wheel Diameter: 200 mm	1
10	Soldering Station	Branded Company Product with at least three years product warranty	Power Output: 60–75 W, Temperature Range: 200°C –480°C, Temperature Control: Digital or Analog with precise adjustment , Weight: Apprx. 1.5 kg for ease of portability and bench use.	5
11	Desoldering Machine	Branded Company Product with at least three years product warranty	power consumption 600 watt, air temp 100 - 500 °C	1
12	Advanced, motorized Sewing Machine	Usha or Equivalent with product warranty	Heavy-duty speed control, and options like drop feed for free-motion sewing, buttonhole functions, twin-needle capability, and high-speed stitching (800-1100 SPM), 20+ stitch functions	1
13	Wood Turning Lathe	Branded Company Product with at least three years product warranty	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	1
14	Power Tools	Bosch or equivalent with product warranty	GSB 500 RE Corded-Electric Drill Tool Set 500 W Motor 100-piece Tools Box Kit Speed Range upto 2600 RPM Impact Rate upto 41600 BPM Chuck Capacity of 10 mm 1 Yr Warranty	1
15	Portable Welding Machine	Branded Company Product with at least three to five years of Warranty	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 300A IGBT inverter ARC welding machine, with Hot Start, Anti-Stick, Arc Force control, and 1.6–5mm electrode size.	1
16	Refrigerator	Branded Company Product with at least three years product warranty	Capacity 200 Litres or More	1
17	Normal and micro Oven	Branded Company Product with at least three years product warranty	Capacity 20L to 30L	1

18	Magnifying Glass with Stand	Scientific or Equivalent with product warranty	Magnification: 2.5x, 3 colour modes, stepless dimmable LED, flexible gooseneck, hands-free design.	2
19	Digital Microscope	Scientific or Equivalent with product warranty	1500X 12MP Digital Microscope with 7" HD LCD Display and built-in Rechargeable Battery	1
20	Mixed Signal Oscilloscope	Scientific or Equivalent with product warranty	2 GHz, 1 GHz, 500 MHz, and 350 MHz bandwidth model, Up to 10 GS/s real-time sample rate on one or two channels, up to 5 GS/s on all four channel, Fast Frame segmented memory acquisition mode with up to 290,000 segments and >310,000 waveforms per second capture rate	1
21	Digital Storage Oscilloscope	Scientific or Equivalent with product warranty	Operating System: Windows, RAM: 512 Megabytes (MB),Disk space: 1 Gigabyte of available hard disk space, Display: XGA 1024×768 with 120 dpi font size recommended,7-inch widescreen colour TFT LCD displays clear, crisp and more stable waveform display	1
22	Signal Generator	Scientific or Equivalent with product warranty	Frequency range, Frequency resolution, Amplitude, Phase modulation capabilities, Pulse and IQ modulation capabilities, Switching speed, Maximum input channels	1
23	Variable Power Supply	Scientific or Equivalent with product warranty	0 to 30V,30 to 60 V	1
24	Bench Top Multimeter	Branded Company Product with at least three years product warranty	0.0025% DCV accuracy ,1 M sample/s digitizing, 16-bits,10-channel scan card option	1
25	Projector	Zebronic or Equivalent with product warranty	1920X1080, also known as Full HD & 4K UHD (3840X2160 or True 4K)	1
26	Heavy Duty Laser Printer	HP or Equivalent with product warranty	Monochrome laser printer with ≥30 ppm speed, 1200×1200 dpi resolution, automatic duplex printing, 250-sheet input tray, monthly duty cycle ≥8000 pages, and USB connectivity	1
27	PCB Milling Machine	Branded Company Product with at least three years of product warranty	Cutttable Materials: Modeling Wax, Chemical Wood, Foam, Acrylic, Poly Acetate, ABS, PCB, Copper glad, 200×300×120 mm working area, 3.125 μm resolution, 0.1 mm line width, drills 0.2–3.175 mm holes at up to 50 cycles/min, 58 mm/s speed, 220 V AC, 3.82 (150") /min milling speed, variable size bit, automatic	1
28	PCB Prototype Machine	Standard Manufacturer with product warranty	1.5KW spindle power,230x200x15mm working area,0.06mm resolution,1kw power consumption,230v,Automatic, 1phase,24000rpm,3700mm/min. working capacity	1
29	Computer workstation in networking	Branded Company Product with at least three Years of product warranty	CPU: INTEL CORE i7-12th Gen or Higher RAM: 8 GB + 512 GB SSD or more Conn:LAN + WIFI + BLUTOOTH + KEYMOUSE Display: 20" DESKTOP MONITOR	5
30	Quadcopter assembly kit	Standard Manufacturer with product warranty	450 mm frame base, 2212 1000KV motors, 30A ESCs, 10x4.5" props, APM 2.8 controller, GPS, 3S 2200mAh LiPo battery, 6+ channel TX/RX, telemetry module, PM2.5, NO2, Ozone, MQ-2 for environmental monitoring	1
31	Smart Board	Standard Manufacturer with product warranty	86" 4K UHD display, 10-point touch, Android OS, HDMI/USB/Wi-Fi, built-in speakers, wall or stand mount, Google ELDA certified	1

32	Relay Module	Standard Manufacturer with product warranty	24V 8-Channel Relay Module with optocoupler, Bluetooth and Wi-Fi capable, compatible with Arduino/Raspberry/PIC arm AVR microcontroller	1
33	GPIO module	Standard Manufacturer with product warranty	128 channel USB/Wi-Fi/Bluetooth/Ethernet interfaces GPIO module with analog inputs	1
34	Electric Bicycle motor & Access	Standard Manufacturer with product warranty	Electric Cycle 36v 250watts Motor, 10AH Battery Pack Full Conversion Kit	1
35	Granite surface plate	Very Good Quality	630 x 630 x 80 mm grade “O”	1
36	Hacksaw	Standard Manufacturer Very Good Quality	6"- 2 No. and 12"-3 No.	5
37	Micro Chisel Set	Standard Manufacturer Very Good Quality	Wood Carving Chisel Set Weight: 340 gm	3
38	Pliers Sets	Very Good Quality	Three different types- 01 each	3
39	Manual PCB Drilling Machine	Branded Company Product with product warranty	3 phase,20,000 RPM spindle speed, 0.3–3.2 mm drill bit capacity, ±0.1 mm accuracy, brushless motor (~100–300W), manual/semi-automatic control, and 230V AC power supply, 230 x 300 mm working area, 59 mm support column dia,5A , socket required, Metal Base	3
40	PCB power Drilling Machine	Branded Company Product with product warranty	100–300W motor, 20,000 RPM spindle, 0.3–3.2 mm drill bit capacity, ±0.1 mm accuracy, 230×300 mm worktable, 230V AC input, safety shield,5A socket	3
41	Cordless drilling machine	Bosch or equivalent with at least three years product warranty	Torque (soft/hard/max.): Min 21/50/- Nm No-load speed (1st gear / 2nd gear): Min 0 – 500 / 0 – 1,900 rpm Weight incl. battery: 1.3 kg or less Max. impact rate: 27,000 bpm Battery type: Lithium-Ion or equivalent Chuck capacity, min./max.: 1.5 / 13 mm Weight excl. battery: 0.99 kg Torque settings: 20+2 or better	2
42	Jig Saw	Branded Company Product with at least three years product warranty	Rated Input Power: Approximately 500 W maximum power consumption. Voltage, Electrical: Nominal 230 V AC supply. Saw Stroke Length: Approximately 20 mm stroke length. Stroke Rate at No Load: Adjustable within approximately 800 to 3,100 spm (strokes per minute). Weight: Approximately 2.08 kg total weight. Bevel Angle: Adjustable within approximately -45° to 45° range.	2
43	Power Circular Saw	Bosch or equivalent with product warranty	1400W power rating, 184mm blade diameter, 5200 rpm no-load speed, 70mm cutting depth at 90°, and weighs 4.1 kg.	2
44	Files Set	Bosch or equivalent with product warranty	Standard Workshop Tool	2
45	File Handles	Bosch or equivalent with product warranty	Standard Workshop Tool	1
46	Needle Files	Branded company	Standard Workshop Tool	2
47	Pipe Vice	Branded company	10-60 mm capacity	2

48	Mini Hacksaw	Taparia, STANLEY etc., with warranty	Standard Workshop Tool	5
49	Ball Peen Hammer	Taparia, STANLEY etc., with warranty	Weight: Approximately 110 grams nominal weight.	5
50	Steel Shaft Claw Hammer	Taparia, STANLEY etc., with warranty	Weight: Approximately 8 oz (220 grams) nominal weight. Dimensions: Around 27.8 cm × 12.4 cm × 3.6 cm (L × W × H) overall size	5
51	Nylon Mallet	Taparia, STANLEY etc., with warranty	Standard Workshop Tool	5
52	Rubber Mallet	Taparia, STANLEY etc., with warranty	Minimum 1.5inch Diameter rubber hammer with wooden handle, Make TAPARIA, STANLEY etc.	5
53	Allen key set	Very Good Quality	Hex Key Size: 1.5,2,2.5,3,4,5,5.5,6,8,10mm; Qty:10pcs/set	2
54	Dremel multi tool kit	Branded Company Product with at least three years product warranty	Dremel 3000-1/25: 130W motor, 10,000–33,000 RPM variable speed, includes 1 attachment and 25 accessories, suitable for cutting, sanding, grinding, and polishing.	2
55	Belt and Disc Sanding Machine	Branded Company Product with at least three years product warranty	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	1
56	Scroll Saw Machine	Branded Company Product with at least three years product warranty	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)	1
57	Tool Wall covering Perforator	Branded Company Product with product warranty	Standard Workshop Tool	3
58	Dremel Moto Saw	Branded Company Product with product warranty	Minimum 16", 120 W, 50 mm cutting depth	1
59	Bench Grinding Machine	Branded Company Product with product warranty	Minimum 0.5 HP, 2880 RPM, 6 Inch, Single Phase	1
60	Power Return Measuring Tape	Freemans or Equivalent with product warranty	3m Power Return Inch Tape Measuring Tape	5
61	Tri Square	Very Good Quality	Size:150 × 80 mm nominal Material: Carbon Steel	5
62	Steel Rule 300mm	Very Good Quality	Product Type: Steel Rule , Scale Size:12"/300mm Material: Stainless Steel	3
63	Steel Rule 600mm	Very Good Quality	Product Type: Steel Rule, ScaleSize:24"/600mm Material: Stainless Steel	2
64	Digital Vernier Calliper	Very Good Quality	Product Type: Digital Caliper, Meas.Range:0–150mm / 0–6" Resolution:0.01mm	5
65	Spirit Level	Very Good Quality	Vials: 3 , Accuracy: 0.5mm/m Length: 300 mm , Product Type: Level	5

66	Dremel Cordless Rotary Tool	Bosch or equivalent	3.6V speed range 8000-25000 RPM speed, USB charging, lightweight design (~0.27 kg), and includes 5 accessories— ideal for light-duty, occasional use.	1
67	GPIO Power Router	Branded Company Product with at least three years product warranty	GPIO Gateway 4G/5G wifi/Ethernet enabled	1
68	Sewing Machine	Branded Company Product with at least three years product warranty	Manual or electric type, 60W–90W motor, foot pedal speed control with basic accessories like needles and bobbins.	1
69	Impact Drill	Branded Company Product with at least three years product warranty	600W, 13mm chuck,	3
70	Ratchet Set	Very Good Quality	Vice Type: Bench, Size:2" nominal; Jaw:50mm	2
71	Router Bit Starter Kit	Very Good Quality	Pieces Per Set: 15 pcs	1
72	Scroll Saw	Ingco or Equivalent with warranty	120W, 400–1600 RPM, 50mm cut depth, 0–45° tilt, variable speed	1
73	Hot Air Blower with Soldering Iron	Standard Manufacturer with warranty	minimum 100°C–450°C, 700W Hot Air Gun + 60W Soldering Iron	5
74	Tin Cutter with Spring	Stanley/ Taparia/ Spartan etc., with warranty	Standard Workshop Tool	10
75	Centrifugal Blower	Branded Company Product with at least three years product warranty	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
76	Screwdriver sets	Very Good Quality and good brand	Flat and Star	2
77	Cutting Mats	Levin or Equivalent	Size: 24 x 36 inches	5
78	Vacuum Cleaner	Branded Company Product with at least three years product warranty	Wet and dry industrial vacuum cleaner with 1000W-1200W power, 15L-20L capacity, HEPA filter, wheeled trolley, noise level below 70dB, and 6m cord length.	2
79	Hot Air Gun	Black and Decker or equivalent	1800 W	5
80	Micrometer	Very Good Quality	Resolution:0.001mm/0.00005" Meas.Range:0–25mm/0–1"	5
81	Glue Gun	Very Good Quality	Standard	5
82	Air Compressor	Very Good Quality and good brand	Direct Driven Air Compressor, 50 Litre, 2.5 HP, pressure 115PSi, weight 36 Kg	1
83	Allen Set Wrench	Taparia, Stanley etc. with warranty	Standard Size	5
84	Tongue and Groove Pliers	Taparia, Stanley etc.	Standard Size	5
85	Non-Contact Voltage Tester	Branded Company Product with at least three years product warranty	Function: Non-contact AC voltage detection tester. 12V to 1000V AC, Sensitivity: Adjustable, with multiple levels, LED Display, Weight: Lightweight, approximately 150 g for ease of portability.	5
86	Wire Stripper	Very Good Quality	Weight: Approx 281g Size:130mm nominal	2
87	Fish Tape	Standard Manufacturer	20 meters, coated fiberglass wire puller	2
88	Flashlights	Standard Manufacturer	Range: Up to 2 km, Rechargeable Battery, 4800mAh	2

89	DC Regulated Power Supply	Standard Manufacturer	Input voltage type (AC or DC) and range, Efficiency of power conversion	3
90	Solder Wick	Standard Manufacturer	Battery: Rechargeable 4800mAh	10
91	Filament Dehydrator	Standard Manufacturer	Dry box 1.75mm, 2.85mm compatible PLA, PETG, TPU, ABS	1
92	Reflow Oven	Branded Company Product with at least three years product warranty	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
93	Glass Cutter	Standard Manufacturer	Diamond - pin	1
94	Gypsum	Standard Manufacturer	Standard size	10 kg
95	Digital multimeter	Branded Company Product with at least three years product warranty	Display Count: Up to 4000 DC Voltage Range: Up to 1000 V AC Voltage Range: Up to 1000 V DC Voltage Accuracy: $\pm 0.5\%$ or ± 3 digits, whichever is higher AC Voltage Accuracy: Within $\pm 1\%$ + 3 digits DC Current Measurement: Up to 10 A AC Current Measurement: Maximum 10 A DC Current Accuracy: $\pm 1.5\%$ + 3 digits (approximate) AC Current Accuracy: $\pm 1.5\%$ + 3 digits (typical) Resistance Measurement: Up to 40 M Ω Resistance Accuracy: Estimated at $\pm 1.5\%$ + 3 digits Capacitance Measurement: Up to 1000 μ F Capacitance Accuracy: $\pm 5\%$ or ± 5 digits Operating Temperature Range: From 0°C up to approximately 40°C Storage Temperature Range: Between -30°C and 60°C Overall Dimensions (H×W×L): Approximately 183×91×49.5 mm Unit Weight: Around 455 grams Safety Compliance: As per IEC 61010-1 & IEC 61010-2-030 standards, suitable for CAT III 600V and CAT II 1000V environments with Pollution Degree 2 classification	5
96	Clothes Iron	Very Good Quality and good brand	Medium size 1500 W	2
97	Oscilloscope	Keysight or Equivalent	ACV Frequency 10Hz~10kHz $\pm$ (0.1%+5)	4
98	Digital Oscilloscope	Branded Company Product with at least three years product warranty	Timeout, Event-Delay, Time-Delay, and Bus Arbitrary Waveform Generator (AWG): Dual-channel, 25 MHz, supporting various waveforms such as sine, square, pulse, ramp, DC, noise, sinc, Gaussian, Lorentz, exponential rise/fall, haversine, and cardiac AWG Sample Rate: 200 MSa/s AWG Vertical Resolution: 14 bits Display: 8-inch WVGA TFT LCD (800 × 480 pixels) Data Logging Capability: Up to 1000 hours Segmented Memory: Supports up to 29,000 segments for efficient waveform storage and retrieval	1

			Connectivity: USB 2.0 (host and device), Ethernet (RJ45), and Go-NoGoBNC. Dimensions (W × H × D): 380× 200× 125 mm or above Weight: 2 Kgs or above Safety Compliance: Conforms to IEC 61010-1 and IEC 61010-2-030 standards, suitable for CAT III 600V and CAT II 1000V environments with Pollution Degree 2 classification. 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: Approximately 350 × 200 × 120 mm or above Unit Weight: 2.5 kg or above Input Impedance: Nominal 1 MΩ // 16 pF Measurement Capabilities: Equipped for automatic parameter extraction, background noise filtering, and AUTOSET configuration for display scaling (time base/gain) Protocol Decoding Support: Capable of analyzing I2C, SPI, UART, CAN, and LIN communication protocols Standard Accessories: Includes mains power cable, user manual (digital format), and one GTL-16E probe per input channel	
99	C – clamp	Very Good Quality	Size: Up to 75 mm	4
100	C-clamp	Very Good Quality	Size: Up to 150 mm	6
101	Ratchet clamp	Very Good Quality	8 inches/200mm	10
102	Baby wise	Very Good Quality	Vice Type: Bench , Size: 2" nominal, Jaw Width: 50mm	2
103	Bench vice	Very Good Quality	Base Type: Fixed , Size: 2–3½" nominal, JawWidth: 60mm	5
104	Function Generator	Branded Company Product with at least three years product warranty	Output Function: The equipment shall provide output waveforms including sine, square, triangle, and TTL signals as required. Frequency Range: For sine and square waveforms: approximately 0.1 Hz up to 3 MHz. For a triangle waveform: approximately 0.1 Hz up to 1 MHz. Frequency Resolution: Frequency resolution shall be maintained within a maximum of 0.1 Hz. Frequency Stability: The frequency stability shall be within ±20 ppm (parts per million). Frequency Accuracy: The frequency accuracy shall be maintained within ±20 ppm. Frequency Aging: Frequency aging shall not exceed ±5 ppm per annum. Amplitude Range: Output amplitude shall be up to 10 V peak-to-peak (Vp-p) into a 50 Ω	1

			load. Amplitude Accuracy: Amplitude accuracy shall be within $\pm 20\%$ at the maximum amplitude setting. Output Impedance: Nominal output impedance shall be $50\ \Omega$ with a tolerance of $\pm 10\%$. Attenuator: A single-step attenuator of $-40\ \text{dB} \pm 1\ \text{dB}$ shall be provided. Display: A 6-osc 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. Ambient Operating Temperature: Normal operation shall be ensured within the ambient temperature range of $0\ ^\circ\text{C}$ to $40\ ^\circ\text{C}$. Dimensions: Maximum dimensions shall not exceed 255 mm (W) $\times$ 95 mm (H) $\times$ 295 mm (D). Weight: The Maximum device weight shall be within 2.5 kg.	
105	Electronic Component Repository (LCR Meter, Variac etc.)	Standard Manufacturer with warranty	Arduino/Raspberry PI/, Various Sensors, Actuators & Output Devices, WIFI/GSM/Bluetooth/GPS communication module, Automatic scale, True RMS reading, Breadboards, Jumper Wires, Soldering Stations, Multimeters	1
106	Anvil	Very Good Quality	30kg/50kg	1
107	Ring spanner set	Very Good Quality	Weight: 3.08 Kg nominal weight. Quantity: 12 pcs per set. Size: 6 mm to 32 mm overall range.	1
108	Combination Spanner set	Very Good Quality	Weight: Approx 649g , Qty: 8pcs/set.	1
109	Combination plier	Very Good Quality	Weight: Approx 422g , Size: 8"/200mm nominal	2
110	Long nose plier	Very Good Quality	Weight: Approx 399g , Size:180mm/6" nominal	1
111	Circlip straight	Very Good Quality	Weight: Approx 399g , Size:130mm/5" nominal	2
112	Circlip bent	Very Good Quality	Weight: Approx 399g , Size: 130mm/5" nominal"	2
113	Diagonal Cutter	Very Good Quality	Weight: Approx 239g , Size:180mm nominal"	2
114	Adjustable spanner	Very Good Quality	Up to 150 mm	2
115	Pipe wrench/vice	Very Good Quality	Max 300 mm	2
116	Snap- off Knife	Very Good Quality	18 mm	2
117	screw driver set	Very Good Quality	Pieces Per Set: 16 pcs	5
118	precision screw driver set	Very Good Quality	Pieces Per Set: 16 pcs	5
119	Max steel snip cutter	Very Good Quality	Length: 250 mm	2
120	PVC Pipe cutter	Very Good Quality	Length: 42 mm	2
121	Small file set	Very Good Quality	Length: 160 mm	2
122	Big file set	Very Good Quality	Length: 200 mm	2
123	Punch set	Very Good Quality	Weight: 390 gm	2
124	Drill bit set	Very Good Quality	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, 11,11.5,12,12.5,13 Wt.: ~1.3Kg nom. wt , Sz(mm):205 $\times$ 115 $\times$ 55 overall	2
125	Pegboard	Very Good Quality	Standard size	5

126	Measuring Meter	Very Good Quality	Length: 30 m	1
127	Measuring meter	Very Good Quality	Length: 5 m	5
128	Goggle	Very Good Quality	Industrial Standard Make	5
129	Apron	Very Good Quality	Apron - Standard Make	5
130	Ear Muff	Very Good Quality	Industrial Standard Make	5
131	Mask	Very Good Quality	Industrial Standard Make	50
132	Fire Extinguisher	Very Good Quality	Industrial Standard Make	6
133	First Aid Kit	Very Good Quality	Industrial Standard Make	2
134	Gloves Pair	Very Good Quality	Gloves – Industrial Standard Make	10
135	Acrylic Sheet	Very Good Quality	3mm, 4ft x 4ft	20
136	Acrylic Sheet	Very Good Quality	4mm, 4ft x 4ft	20
137	Acrylic Sheet	Very Good Quality	5mm, 4ft x 4ft	20
138	Foam Sheet	Very Good Quality	8mm, 4ft x 4ft	2
139	Foam Sheet	Very Good Quality	10mm, 4ft x 4ft	1
140	Foam Sheet	Very Good Quality	12mm, 4ft x 4ft	1
141	Foam Sheet	Very Good Quality	15mm, 4ft x 4ft	1
142	Ply Board	Very Good Quality	5mm, 2ft x 4ft	12
143	Nylon Rod	Very Good Quality	10mm, 1m	5
144	Nuts	Very Good Quality	3mm,4mm, 5mm,6mm,8mm, 10mm, 12mm Pack of 100	1
145	Bolts	Very Good Quality	3mm,4mm, 5mm, 6mm,8mm, 10mm, 12mm Dia 1" Inch Pack of 100	1
146	Screws	Very Good Quality	3mm, 4mm, 5mm Pack of 100	1
147	Washers	Very Good Quality	3mm,4mm, 5mm, 6mm, 8mm, 10mm, 12mm Pack of 100	1
148	Studs	Very Good Quality	6mm,8mm 1 Meter	2
149	Nails	Very Good Quality	1",2",3",1.5",5" Pack of 100	1
150	Foam Sheet	Very Good Quality	15mm, 4ft x 4ft	1
151	Fevicol	Very Good Quality	2Kg	1
152	Two Way Tape	Very Good Quality	Standard size with different colors	10
153	PVC Pipe	Very Good Quality	0.75"	10ft
154	PVC Pipe	Very Good Quality	1"	10ft
155	PVC Pipe	Very Good Quality	1.5"	10ft
156	PVC Pipe	Very Good Quality	2.0"	10ft
157	Aluminium channels	Very Good Quality	L, C, Box, strip length 12 ft	2
158	PCB Drill Bit	Very Good Quality	0.4mm	10
159	PCB Drill Bit	Very Good Quality	0.8mm	10
160	PCB Drill Bit	Very Good Quality	1mm	10
161	Drill Bit	Very Good Quality	2mm	10
162	Drill Bit	Very Good Quality	4mm	10
163	Drill Bit	Very Good Quality	6mm	10
164	Arduino	Very Good Quality	UNO R3	5
165	Arduino	Very Good Quality	NANO	5
166	ESP	Very Good Quality	Wi-Fi Camera	5
167	Raspberry Pi Model	Very Good Quality	4B, 4GB	3
168	ESP8266	Very Good Quality	Node MCU	2
169	ESP32	Very Good Quality	Development Board	2
170	Beagle	Very Good Quality	bone blue	1

171	Beagle	Very Good Quality	bone Black	1
172	Voltage Regulator Module	Very Good Quality	3V, 5V and 12V	5
173	Mini Micro submersible Water Pump	Very Good Quality		2
174	Piezo electric Plate	Very Good Quality		2
175	LED Matrix Module	Very Good Quality	8*8	2
176	Bluetooth	Very Good Quality		2
177	LED Display	Very Good Quality	7-Segment	2
178	GSM/GPRS/GPS Module	Very Good Quality		2
179	Laser Module	Very Good Quality		2
180	LDR Module	Very Good Quality		2
181	Matrix Keypad	Very Good Quality	4×4	2
182	Joy Stick Module	Very Good Quality		2
183	Active Buzzer	Very Good Quality	BIG	2
184	Active Buzzer	Very Good Quality	SMALL	2
185	Motor Driver	Very Good Quality		2
186	Sound Playback Module	Very Good Quality		2
187	BO Motors	Very Good Quality		10
188	Vibrating Motor	Very Good Quality		10
189	Capacitive Touch Switch	Very Good Quality		2
190	IR Sensors	Very Good Quality	Obstacle Sensors	2
191	Triple Axis Magnetometer	Very Good Quality		2
192	Humidity Sensor	Very Good Quality		2
193	MQ-2	Very Good Quality		2
194	MQ-3	Very Good Quality		2
195	MQ-4	Very Good Quality		2
196	MQ-5	Very Good Quality		2
197	MQ-7	Very Good Quality		2
198	Ultrasonic Sensor Module	Very Good Quality		2
199	Triple Axis accelerometer	Very Good Quality		2
200	PIR Motion Detector Module	Very Good Quality		2
201	Pulse Rate Heart Sensor	Very Good Quality		2
202	Soil Moisture Sensor	Very Good Quality		2
203	Touch Sensor	Very Good Quality		2

204	Rain Drop Sensor	Very Good Quality		2
205	Flex Sensor	Very Good Quality		2
206	Temperature Sensor	Very Good Quality		2
207	Force Pressure Sensor	Very Good Quality		2
208	Colour Recognition Sensor	Very Good Quality		2
209	Water Flow Sensor	Very Good Quality		2
210	Sound Sensor	Very Good Quality		2
211	IR Sensor Array for Line Following	Very Good Quality		2
212	RFID Reader-Tags	Very Good Quality		2
213	RF Modules Tx & Rx	Very Good Quality	315 MHz ASK	2
214	Stepper motor with Driver Board	Very Good Quality		2
215	Servo Motor	Very Good Quality	360 rotation	10
216	Servo Motor	Very Good Quality	180 rotation	10
217	Metal Gear Servo Motor	Very Good Quality	180°Rotation	10
218	Solder Wire	Very Good Quality	100 gm	10
219	Solder Flux	Very Good Quality		10
220	330 Points Solderless Breadboard	Very Good Quality		5
221	400 Points Solderless Breadboard	Very Good Quality		5
222	Copper Clad Board single side	Very Good Quality		10
223	Copper-clad board double-sided	Very Good Quality		10
224	Male to Male Breadboard Jumper	Very Good Quality		100
225	Female to Female Breadboard Jumper	Very Good Quality		100
226	Male to Female Breadboard Jumper	Very Good Quality		100
227	Push Button Switch	Very Good Quality		20

228	3D printer Filament	Very Good Quality	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
229	Table saw	Branded Company Product with at least three years product warranty	Rated input power: Max 1800 W Incline setting: 45 ° L / 0 ° R Table size: Up to 555 x 555 mm Saw blade diameter: 254 mm Cutting height 90°: 80 mm Cutting height 45°: 55 mm Saw blade bore diameter: 30 mm, Weight 24.4 kg or less Max. cutting capacity on the right: 545 mm No-load speed: 4300 rpm Cutting height 90°: 80 mm Cutting height 45°: 55 mm	1
230	Angle Grinder	Branded Company Product with at least three years product warranty	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
231	Straight Grinder	Branded Company Product with at least three years product warranty	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
232	Cordless Screwdriver	Branded Company Product with at least three years product warranty	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
233	Cordless Vacuum Cleaner with Starter Kit	Branded Company Product with at least three years product warranty	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

234	Rotary Tool Kit	Branded Company Product with at least three years product warranty	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. Width: About 4.1 cm nominal width. Depth: Roughly 4.3 cm depth dimension. No-Load Speed: Variable speed ranging from 5,000 up to 35,000 rpm. Battery Technology: Not applicable (n.a.). Speed Setting: Fully variable speed control as required. Accessory Quick-Change System: Equipped with a multi-chuck for rapid accessory interchange. Vibration Level: Approximately 18 m/s² measured vibration	2
-----	-----------------	--	---	---

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.

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 will be specified in the purchase order Vaageswari College of Engineering, Ramakrishna Colony, Beside LMD Police Station, Karimnagar – Dist, Telangana State- 505527. The entire contract shall remain valid for a period of three (3) months from the date of award.

1. 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.
- Copy of valid PAN Card.
- Chartered Accountant's Certificate for turnover for FY 2021–22, 2022–23, and 2023–24.
- CA-certified and audited Balance Sheets and Financial Statements (Form 3CB/3CA) for the last three financial years.
- Copies of Work Completion or Experience Certificates of similar completed works.
- Valid Shop Establishment License or Factory License.
- 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).
- Declaration of agreed specifications on company letterhead, duly signed and stamped.
- Any other documents in support of technical eligibility.

2. 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. Original technical brochures or scanned versions of product catalogs should be submitted with the bid. 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.

3. Eligibility and Qualification Criteria

All bidders must be OEMs or authorized partners/distributors with valid authorization for the products they are quoting. Authorization letters must be submitted on the OEM's official letterhead.

It is mandatory that the bidder or OEM has a registered support office in India to provide warranty and after-sales support. In the case of imported equipment, either the OEM or their authorized seller must submit a certificate confirming the presence of such a service support facility in India. The OEM must also submit a declaration confirming the availability of spare parts for the quoted products for a minimum of one year and authorize the bidder to participate in the tender.

4. Financial Criteria

Each bidder must have an average annual turnover of ₹5 Crores or more over the last three financial years (FY 2022–23, 2023–24, 2024–25). The turnover must be supported by a CA certificate or audited financial statements.

Prices quoted must be inclusive of all taxes (GST, customs, etc.), transportation, packaging, insurance, unloading, installation, commissioning, and training charges. 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 on the basis of 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. Other Conditions

Delayed delivery or installation may result in cancellation of order or imposition of penalties, as deemed fit by the purchaser. The scope of the supply and service must be entirely as per the technical specifications. Bids with partial compliance or deviations shall not be entertained.

Bids shall be submitted in English only. Bidders must not be blacklisted or under investigation by any government authority. Partial deliveries may be accepted only with prior written approval from the signatory.

All disputes shall be subject to arbitration in accordance with the Arbitration and Conciliation Act, 1996. The contract shall be governed by the General Financial Rules (GFR) 2017 and the terms set forth in this document.

The jurisdiction for all legal proceedings shall be Karimnagar, Telangana State.

Submission Deadline and Contact Details:

All quotations must be submitted by 10-10-2025 (extended date) to the email ID: s4.principal@gmail.com or sent in hard copy to:

Principal
Vaageswari College of Engineering
Beside LMD Police Station, Ramakrishna Colony
KARIMNAGAT 505527
TELANGANA

Coordinator, AICTE IDEA LAB
9502588609
Email: s4.principal@gmail.com