SRI VASAVI ENGINEERING COLLEGE
(An **Autonomous** Institution Affiliated to **JNTUK, Kakinada**)
(Sponsored by Sri Vasavi Educational Society)
(Approved by **AICTE**, New Delhi & Accredited by **NAAC with "A" Grade**)
(**NBA** Accreditation to B.Tech., EEE, ECE, CSE and ME Branches for 3 Years)
Pedatadepalli, **TADEPALLIGUDEM - 534 101**, W.G.Dist, (A.P.)
☎ 08818 - 284355, Fax : 08818-284322
E-mail : principal@srivasaviengg.ac.in

Dr. GUDURU. VNSR. Ratnakara Rao
B.E., M.E, Ph.D.
Principal

Tender Ref. No: : SVEC/ Idealab/ 2025-26 / 01 Date: 02-09-2025

Tender Notice

Sealed tenders are invited from reputed and experienced suppliers, manufacturers, or authorized distributors for the supply, installation, and commissioning of equipment, tools, and consumables for setting up **an AICTE IDEA Lab at our institute.**

The detailed specifications of the required items are enclosed with this document.

Mere submission of quotation/lowest price for the process doesn't ensure any assurance for the work/purchase order. Quotation(s) must be submitted separately for Mechanical Equipment (Annexure-4A), Electronics Equipment (Annexure-4B), Computer Equipment(Annexure-4C), tools(Annexure-4D), and consumables(Annexure-4E) in original, clearly mentioning validity period for approved rates (basic price), all levies, taxes, installation charges, warranty period (Minimum 3 years from the date of installation), discounts (if any), etc. along with any other costs thereon; failing which quotation will not be considered. Following documents (mandatory), must also be furnished along with the quotation(s) in a separate cover.

I. Date of Establishment of the firm
2. Experience Certificate (certificate from the customers/clients dated not more than 3 years)
3. PAN
4. One Cancelled Cheque,
5. GST Reg. No.
6. IT return of last 3 years
7. Details of the institutions for which equipment is supplied earlier (AICTE-IDEA Lab in particular) Quotations must contain the details of the aforementioned requirements along with other relevant information and terms & conditions (if required).
8. Declarations (Annexure- 1 to 3)

Lead Time of delivery must be clearly mentioned to avoid rejection. Late Delivery Clauses will be applicable in such cases, arbitration of which will be conducted in jurisdiction of institute's choice, as will be mentioned in Purchase Order.

No prescribed form relating to the technical bid submission is compulsorily expected by the college. A self-made format is acceptable. Financial bid must be in the specified format.

Payment will be made in online by the institution after successful completion of the work (delivery, complete installation and satisfactory demonstration).

The quotation(s) clearly super scribed "QUOTATION FOR AICTE- IDEA LAB, SVEC" and should sent to "The Principal, Sri Vasavi Engineering College (A), Pedatadepalli, Tadepalligudem, West Godavari, Andhra Pradesh-5341101" on or before 15.00 Hrs of 20-09-2025.

After receiving the Work/Purchase Order, the selected suppliers will be required to submit proforma invoice for items. The Principal (Chief Mentor, AICTE-IDEA lab) Sri Vasavi Engineering College, reserves the right to accept/reject any quotation without assigning any reason thereof.

Note : Price bid can be opened only after the qualifying the technical bid. Hence, suppliers are required to send the technical bid and financial bid separately.

Principal
Chief Mentor:: AICTE-IDEA LAB

PRINCIPAL
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Principal

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 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.

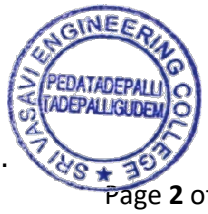
Quotations submitted by bidders must remain valid for a minimum of 90 days from the final date of submission. Any quotation that does not meet this validity period will be considered non-compliant.

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.
- Copy of submitted GST return (at least up to November 2024).
- 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.
- Valid EPF, ESIC, and Professional Tax Registration Certificates (where applicable).



- Income Tax Return Acknowledgements for FY 2021–22, 2022–23, and 2023–24.
- Declaration/Affidavit (on ₹500/- Stamp Paper) regarding no blacklisting from IITs/NITs/Govt. Offices/PSUs/Autonomous Bodies.
- Complete, signed, and stamped tender document including amendments and deviation sheets, if any (to be uploaded online only).
- Declaration of agreed specifications on company letter head, duly signed and stamped.
- Any other documents in support of technical eligibility.

All bidders are required to quote for all the items listed in the BoQ. Partial or item-wise quotations will be summarily rejected. Each bidder is allowed to submit only one quotation per package; multiple submissions from a single bidder will lead to disqualification.

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.

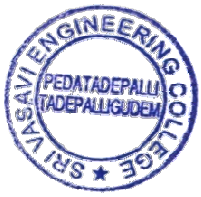
Original technical brochures or scanned versions of product catalogs should be submitted with the bid. Wherever available, URLs to the OEM's official product page should also be provided for cross-verification.

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. 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.

Bidders must demonstrate relevant experience by submitting a minimum of three Purchase Orders (executed within the last five years) for similar equipment supplied to academic, R&D, or industrial institutions. A list of at least five institutional clients (with contact information) must be provided as a reference.



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.

5. 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. 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.

6. 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.

7. 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.

SRI VASAVI ENGINEERING COLLEGE PEDATADEPALLU TADEPALLIGUDEM

8. 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.

9. Other Conditions

No bidder shall be given preference based on category, class, or affiliation. The procurement may be extended to additional phases (e.g., Phase II) depending on availability of funds and institutional requirements.

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 BoQ and technical specifications. Bids with partial compliance or deviations shall not be entertained.

10. Submission Deadline and Contact Details

All quotations must be submitted on/before, 15.00Hrs of 20-09-2025 sent in hard copy to: Principal, Sri Vasavi Engineering College (A), Pedatadepalli, Tadepalligudem, West Godavari, Andhra Pradesh-5341101.

Contact: Dr. Anilkumar Chappa, Faculty Coordinator, 8309105918

Principal
Chief Mentor:: AICTE-IDEA LAB

PRINCIPAL
SRI VASAVI ENGINEERING COLLEGE
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Annexure-1

Declaration of Non-Blacklisting

(To be submitted on the Rs 500/-stamp paper and signed by the authorized signatory)

I/We, M/s _____, having our registered office at _____, do hereby declare that:

1. **We have not been blacklisted or debarred** by any Government Department, Public Sector Undertaking, Autonomous Body, or any other Government Agency in India or abroad.

2. We are **not involved in any litigation** that may impact or compromise the timely delivery, quality, or execution of services/goods as required under this tender.

3. We understand that **any false declaration** in this regard shall result in our disqualification and may lead to further legal action by the procuring entity.

4. All the information and documents submitted by us in the bid are **true and correct to the best of our knowledge and belief.**

Authorized Signatory:

Name:

Designation:

Company Seal:

Date:

Annexure-2

Declaration on Non-Chinese and/or non-Pakistan Origin of Equipment / Instruments / Machinery

(To be submitted on the bidder's letterhead and signed by the authorized signatory)

I/We, M/s _____, having our registered office at _____, do hereby declare that:

1. All equipment, machinery, instruments, or components proposed to be supplied under this tender are not manufactured in the People's Republic of China and/or Pakistan, nor are they of Chinese/Pakistan origin or assembled using parts sourced from Chinese/Pakistan manufacturers.
2. We fully comply with the Government of India's guidelines, orders, and circulars regarding the procurement of goods from countries sharing a land border with India, particularly those related to restrictions on Chinese origin equipment as per: o Ministry of Finance, Department of Expenditure, Public Procurement Division, Order No. F.No.6/18/2019-PPD dated 23rd July 2020, and related amendments.
3. We understand that non-compliance with this declaration shall render our bid liable for rejection, and may also invite penal action including blacklisting.
4. We undertake that, if at any stage the above declaration is found to be false, Sri Vasavi Engineering College and Management, shall be at liberty to terminate the contract and forfeit our security deposit/performance guarantee without notice.

Authorized Signatory:

Name:

Designation:

Company Seal:

Date:

Annexure-3

BID Security Declaration

I/We understand that, as per tender conditions, bids must be supported by a Bid Security Declaration.
I/We accept that I/We may be disqualified from bidding for any contract with [Institution Name] for a period of one year if I am / we are in breach of any obligation under the bid conditions, including:
(a) Withdrawal/modification of bid during the period of bid validity.
(b) Failing to sign the contract after award of bid.

Authorized Signatory:
Name:
Designation:
Company Seal:
Date:

Annexure-4A

List of Mechanical Equipment with Specifications

S. No	Equipment	Make/ Model	Specifications	Qty	Cost per Unit (Rs.)	Total Cost (Rs.)
1.	Single Nozzle 3D printer		Printing Technology: Fused Filament Fabrication (FFF) or Fused Deposition Modeling (FDM). Printable Area: The minimum printable area should be at least 310 x 310 x 310 mm or above Printer Design: Core XY or Cartesian. Temperature Range: Hot end: Up to 300°C or above Heat bed: Up to 120°C. or above. Nozzle: Compatible with All polymers, 0.4, 0.6 and 0.8mm Steel Sheet: Provided with satin or smooth PEI surface. Filament Diameter: 1.75mm (supports PLA, PETG, ASA, ABS, etc.). Extruder: Gearbox with 1/10 ratio, Speed : 550 MM/Sec or above Stepper Drivers for smooth motion. or equivalent Stepper Motors: Choose between 1.8° or precise 0.9° X, Y stepper motors. LCD Screen: 3.5″ graphic 65k color screen or larger. Connectivity: USB drive, LAN, or internet. Supported Materials: PLA, PETG, ASA, ABS, PP, PC, flexible filaments, and more. Wi-Fi Module: Built-in (network connectivity not required for setup or operation). Compatibility: Windows, macOS, Linux. Printer Dimensions: The maximum physical dimensions of the system 700 X 700 X 700 or above. Fully enclosed Machine.	1		
2.	PCB Milling Machine		Cuttable Materials: Modeling Wax, Chemical Wood, Foam, Acrylic, Poly Acetate, ABS, PCB,Copper glad, etc Table Size: 225 (X) × 150 (Y) mm or more Drive System: Stepping Motor (X, Y, Z Axis) Operating Speed: 800 mm/min Software Resolution: 0.01 mm/step Position accuracy : 0.01 to 0.02 mm Max Travel Speed (mm/sec)-58 (2.28 “) Drilling (mm)-0.2 -3.175 (8-125 mil) Maximum Drilling Cycles/ Min-50 Spindle Motor: DC Motor Type 380 or More Spindle Speed: Adjustable 20,000 and above rpm or more Tool Chuck Type: Collet Interface: USB or cable Control Commands: RML-1, NC code Power Supply: DC	1		

			24V, 2.5A (via AC 100– 240V, 50/60Hz adapter) Power Consumption: Approx. 50 W or more			
3.	CO2 Laser Cutting Machine		Working Area: Min 600 x 900 mm or above Laser Type: CO2 DC Glass Laser Tube/RF Metal Laser Tube Laser Power: 80/100W Wave Length: Upto 10.6 Micrometer Cutting Speed: 30000 mm/min or more Engraving Speed: 64000 mm/min or more XY Axis: LM Guide Rail or equivalent Cooling: Air/ Water Cooling Supply Voltage: 230V/415 V Accessories: CO2 Focus Lens: 1 No. Mirror 25mm: 3 Nos. Acetone: 1 litre Acrylic sheet: 2 Nos	1		
4.	Vinyl Printer		Dimensions: 50 cm x 15 cm x 15 cm or above Weight: 15.4 lbs or less Max cut size using machine mat: 11.5 inch x 23.5 inch or more Cut speed: up to 14.1 ips	1		
5.	3D Scanner		Technology: Stereo camera structured light with focusable cameras or equivalent CPU: Quad-core 64-bit SoC, 1.5GHz with integrated GPU RAM: 4 GB Projector: DLP MEMS mirror or equivalent Camera Sensor: Sony 13 MP or better Scan Speed: 4 seconds or more Working Distance：Effective Working Distance: 160mm-1400mm Scan Speed：980,000points/s, up to 14FPS Align Modes：Feature Alignment, Hybrid Alignment, Texture Alignment, Global Markers Safety：Eye-safe Texture Scan：Yes Interface：USB2.0 or above Outdoor Scanning：Yes Output Formats：OBJ; STL; PLY; P3; 3MF Scanning Environment: Indoor and outdoor (shaded) Texture / Color Scanning: Yes Minimum Capturable Feature Size: 0.2 mm or less Scanner Weight: 500 grams or less Scanner Dimensions: upto 240 × 60 × 60 mm Compatible OS: Any OS supporting a modern web browser			
6.	Lathe Machine cum milling		Centre Width: Up to 400 mm or better Height of Centers: Up to 88 mm Maximum Workpiece 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	1		

			Chuck: 3-jaw chuck as per DIN 6386, centrically 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: 1nos Tungsten disposable tips ten-piece set: 1 No. Sample workpieces (Nylon Rod, Aluminium Rod) Desktop: 1 No.			
7.	CNC Router		Working Area: Min 1300 x 2500 mm Z Axis Working Area: 200 or above Resolution: ±0.03/300mm or more CNC Spindle: 3KW or more Lathe Structure : Welding Steel Structure or equivalent XYZ Structure: Rack Pinion , Ball Screw Linear Rails Max Spindle Speed : Min 18000RPM Table: T-Slot/Vacuum Bed/Water Bed Repeatability: ±0.03 Working Mode: Stepper Motor/Servo Motor Dust Collector : To be included by Vendor Voltage: AC 220V/415V, 50/60 Hz, 3 Phase	1		
8.	Belt and Disc Sanding Machine		Motor: 230V 50Hz Power: 380W S2 30min No-load Speed: 1450rpm or more Belt Size: 100x914mm or less Disc Size: 150mm or better Table Titing Range: 0°-45° Belt Titing Range: 0°-90° Table Size: upto 190x125mm	1		
9.	Scroll Saw		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		
10.	Wood Turning Lathe		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		

11.	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		
12.	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: 15–200 Amps DC Insulation Class: F Type Ingress Protection: IP21 Dimensions (L×W×H) with Handle: upto 320×120×195 mm Weight (Approx.): 4.3 kg or less	1		
13.	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 Bed Type Free Arm/Flatbed convertible Bobbin Type Drop & Sew Bobbin System	1		
14.	Filament Dehydrator		Operating Temperature Range: Min 45°C– 70°C Drying Time Setting: 0–48 hours or higher Hot-Air Heating: upto 360° circulation Moving Speed: 300 mm/s or more Power Rating: 160 W Shipping Weight: 2.5 kg	1		
15.	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: upto 25 kg	1		
16.	Smoke Meter			1		
17.	5-Gas Analyser			1		

18.	Normal Oven		Oven Cap: 20L or more Type: Solo Door: Side Swing Child Lock: Yes Completion Beeper: Yes Power Levels: upto 5 Control: Membrane Type Cavity Mat: Anti-Bacterial Dims(mm):455×252×320 PowerOut:700W or less	1		
19.	Refrigerator		Capacity:183L or more AnnualEnergyConsumption:148kWh/Year or less RefrigeratorFreshFoodCapacity:165L or more Freezer Capacity: min 18L BottleCount:5 or more NoiseLevel:40dB or less Installation Type: Freestanding	1		

Annexure-4B

List of Electronics Equipment with Specifications

S. No	Equipment	Make/ Model	Specifications	Qty	Cost per Unit (Rs.)	Total Cost (Rs.)
1.	Digital multimeter		Display Count: Up to 4000 DC Voltage Range: Up to 1000 V AC Voltage Range: Up to 1000 V DC Voltage Accuracy: ±0.5% or ±3 digits, whichever is higher AC Voltage Accuracy: Within ±1% + 3 digits DC Current Measurement: Up to 10 A AC Current Measurement: Maximum 10 A DC Current Accuracy: ±1.5% + 3 digits (approximate) AC Current Accuracy: ±1.5% + 3 digits (typical) Resistance Measurement: Up to 40 MΩ Resistance Accuracy: Estimated at ±1.5% + 3 digits Capacitance Measurement: Up to 1000 µF Capacitance Accuracy: ±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		
2.	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		

			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 Connectivity: USB 2.0 (host and device), Ethernet (RJ45), and Go-NoGo BNC 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			
3.	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: 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,	4		

			UART, CAN, and LIN communication protocols Standard Accessories: Includes mains power cable, user manual (digital format), and one GTL-16E probe per input channel			
4.	Power supply		Output Configuration: 4-channel design with independent electrical isolation across all outputs Channel Output Ranges: • CH1 & CH2: Adjustable output voltage from 0 to 32V with a current delivery capacity up to 3A • CH3: Variable range 0 to 5V supporting up to 1A • CH4: Output adjustable from 0 to 15V with a load current of up to 1A Constant Voltage Operating Mode Line Regulation: ≤ 0.01% + 3 mV (approximate value within rated voltage range) Load Regulation: ≤ 0.01% + 3 mV (across rated load variation) Ripple & Noise: ≤ 1 mVrms across full bandwidth Constant Current Operating Mode Line Regulation: ≤ 0.2% + 3 mA Load Regulation: ≤ 0.2% + 3 mA Ripple Current: ≦ 3 mArms (typical) Safety & Operational Features Output Control: Independent output ON/OFF switching functionality is required Voltage Resolution: Approximately 100 mV (*1) Current Resolution: Approximately 10 mA (*1) Display Parameters Display Units: Four separate displays required for individual channel status visualization Display Type: 4.3-inch LCD (color or monochrome as applicable) Functional Features Tracking Operation: Supported (required for synchronizing output behavior) Auto Series/Parallel: Supported (automatic internal reconfiguration required) Power Requirements Supply Input: 230V AC ±10%, 50 Hz Mechanical Specifications Maximum Dimensions (W × H × D): Within 200 mm × 100 mm × 200 mm Maximum Weight: 10 kg or less	4		

5.	Function Generator		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 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 load. Amplitude Accuracy: Amplitude accuracy shall be within ±20% at maximum amplitude setting. Output Impedance: Nominal output impedance shall be 50 Ω with a tolerance of ±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 ±10%, with frequency 50/60 Hz. Ambient Operating Temperature: Normal operation shall be ensured within the ambient temperature range of 0 °C to 40 °C. Dimensions: Maximum dimensions shall not exceed 255 mm (W) × 95 mm (H) × 295 mm (D). Weight: Maximum device weight shall be within 2.5 kg.	4		
6.	Bench Top Multimeter		DC Voltage: Range: 500 mV to 1000 V across 5 ranges. Accuracy: ±(0.03% rdg + 4 digits). Input impedance: 10 MΩ. AC Voltage (True RMS): Range: 500 mV to 1000 V across 5 ranges. Accuracy: ±(0.5%–5% rdg + digits) depending on frequency and range. Input impedance: 10 MΩ. DC Current: Range: 500 μA to 20 A across 6 ranges. Accuracy: ±(0.02%–0.3% rdg + 2 digits) depending on range. AC Current (True RMS): Range: 500 μA to 20 A across 6 ranges. Accuracy: ±(0.5%–1% rdg	4		

			+ digits) depending on frequency. Resistance: Range: 500 Ω to 20 MΩ across 6 ranges. Accuracy: ±(0.1%–0.3% rdg + digits) depending on range. Diode Test: Max forward voltage 1.5 V, open voltage 2.8 V. Capacitance: Range: 5 nF to 50 µF. Accuracy: ±(2% rdg + 4 digits). Frequency: Input level varies by range; functions include Auto/Manual Range, Max, Min, dBm, Rel, Hold. Continuity Beep: Threshold <5 Ω. Display: Dual 7-segment LED, 0.4" and 0.5". Power Source: AC 100/120/230 V ±10%, 50/60 Hz. Dimensions & Weight: Approximately 251 × 91 × 291 mm; 2.6 kg.			
7.	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 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 safety standards. Dimensions: Compact, handheld design suitable for field use (approx. 150 mm × 30 mm × 25 mm). Weight: Lightweight, approximately 150 g for ease of portability.	5		

8.	LCR Meter		Display: Approximately 2.8” TFT touch LCD screen. Resolution: 25,000 or above counts resolution on both primary and secondary displays. Basic Accuracy: Within ±0.2% under standard conditions. Test Frequencies: Six or eight selectable frequencies depending on model variant. Measurement Combinations: Up to 15 different measurement combinations available. Test Level: Selectable AC test levels approximately 0.3 V, 0.7 V, and 1 V rms; DC test level selectable at ±1 V. Measurement Speed: Selectable measurement speeds of approximately 10 measurements per second (fast) and 2.5 measurements per second (slow). Auto LCR Mode: Automatic identification and measurement of component types within supported ranges. Data Hold: Feature available to hold measured data on display. Interface: USB virtual COM port provided for remote communication capabilities. Software: Datalogging software available for data capture and analysis.	1		

Annexure-4C

List of Computer Related Equipment with Specifications

S. No	Equipment	Make/ Model	Specifications	Qty	Cost per Unit (Rs.)	Total Cost (Rs.)
1.	Smart Board		Display Size: Approx 75Inch (190 cm) Up to Resolution: 4KUHDorHigher Brightness: Min 350 nits; Typ400nitsApprox Contrast Ratio: Typ 1200: 1Upto Response Time: Approx 8ms Viewing Angle: Approx178DegreesWide WorkingFrequency:1.5GHzNominal RAM:4GBOrMore InternalStorage:32GBMin OS: Android Based HDMI: 3Ports USB: 2Ports Sensing Type: Infrared Touch Frame Surface Protection: 4mm Toughened Glass Or Equivalent Infrared Touch Points: 20Approx Voltage:DC+5V±5%Range OPS: Optional	1		
2.	Projector		Projection Tech: RGB liquid crystal shutter projection (3LCD) Up to Connectivity: USB Type B: 1port (FirmwareUpdate/Copy OSD) Approx AnalogInput:D-Sub15pin:1port Digital Input: HDMI:1port Projection Lens: Type: No Optical Zoom/Focus (Manual)Nominal FocalLength:16.70mm Approx FNumber:1.44 Nominal Zoom:1.44-1.95 Ratio (Wide to Tele) ThrowRatioRange:1.00–1.35(Digital Zoom Approx	1		
3.	Desktop		CPU: INTEL CORE I7-12THGEN or Higher RAM:8GB+512GB SSD Conn: LAN+WIFI+BLUTOOTH+KEYMOUSE Display:20" DESKTOP MONITOR	5		

4.	Printer		Functions: Print, Scan, Copy Printer Type: Laser Nominal Dims(mm):409×398.5×267Approx Weight:9.7KgNominal PrintSpeed:Upto30ppm(A4Size)Approx Warranty:1YearOn-Site PrintResolution:600×600dpi,HQ1200(2400× 600dpi) Quality Approx 2Sided-Duplex-PaperType:Plain,Thin,RecycledApprox 2Sided-Duplex-PaperSize:A4 PaperHandling:Tray#1-PaperType:Plain,Thin,Recycled Tray#1-MaxCapacity:Upto250Sheets(80g/m^2)Approx PaperOutput:Upto100Sheets(80g/m^2)FaceDo wnTray;OneSheetFaceUpTrayApprox Copy- Colour /Mono: Yes/Yes Multiple Copies: Sorts/StacksUpto99PagesApprox Enlarge/Reduce:25%-400%(In1%Steps)Approx CopyResolution:600×600dpi 2Sided-Duplex-CopyPaperType:Plain,Thin,Recycled 2Sided-Duplex-CopyPaperSize:A4 Scan-ResolutionInterpolated:Upto19200×19200dp iApprox Scan- ResolutionGlass:Upto600×2400dpiApprox Connectivity:Hi-SpeedUSB2.0, DisplayType:16Chars×2Lines MemoryCapacity:32MBApprox PowerSource:220-240VAC50/60Hz PowerConsumption-Ready:Approx60W PowerConsumption-Sleep:Approx6.6W PowerConsumption-Off:Approx0.08W NoiseLevel:50dB(A)Approx	1		

Annexure-4D

List of Tools with Specifications

S. No	Equipment	Specifications	Qty	Cost per Unit (Rs.)	Total Cost (Rs.)
1.	Soldering Station	Power Rating: Approximately 60 W maximum output power. Temperature Range: Adjustable from approximately 200 °C up to 480 °C. Temperature Stability: Within ±2 °C under normal operating conditions. Heating Element: Ceramic heating element for rapid heat-up and efficient temperature maintenance. Display: Digital or analog temperature display (depending on variant) for precise temperature control. Temperature Control: Adjustable via knob or digital interface with fine resolution. Power Supply: AC 220 V ±10%, 50/60 Hz. Safety Features: Thermal cutoff and overload protection within required standards. Dimensions: Compact design with 100 mm × 100 mm × 90 mm (W × H × D) or above Weight: Approximately 1.5 kg for ease of portability and bench use.	3		
2.	Digital Microscope	Specification: Magnification: 1600X Light source: 8 LED lights Resolution: 1920×1080, 640*480 Pixel: 30W Focal length: 3-40mm manual adjustment Support Android 4.2 or above/widows/Mac system	1		
3.	Soldering Rework Station	Soldering Iron Power: Up to approximately 60 W output power with temperature adjustable within approximately 200 °C to 480 °C range. Heating Element: Needle bit with MCH heater providing rapid heat-up and stable temperature control within ±2 °C. Hot Air Blower Power: Up to approximately 500 W output power with temperature adjustable within approximately 200 °C to 450 °C range, multiple nozzles included. Hot Air Features: Auto-pause function on placement in cradle, airflow adjustable within operational limits. DC Power Supply: Provides output voltage approximately 15 V up to 2 A maximum current plus 5 V USB output for auxiliary power. Control: Microcontroller-based system with LED indicators	1		

		for temperature and mode selection. Safety: ESD-safe design compliant with applicable standards. Build: Metallic body with powder coating, approximate dimensions 280 mm × 180 mm × 140 mm (W × H × D). Weight: Approximately 3.5 kg. Power Source: AC 220 V ±10%, 50/60 Hz. Accessories: Includes soldering iron with needle bit, hot air blower with 3 nozzles, iron stand with sponge, hot air cradle, patch cord, and power cord. Operating Temperature: Suitable for ambient temperature approximately 0 °C to 40 °C			
4.	Hand Drill Machine	Rated Input Power: Approximately 500 W or above maximum power consumption. Bit Holder: Standard 1/2"-20 UNF thread type. No-Load Speed (1st Gear): Adjustable from 0 up to approximately 3,000 rpm. Power Output: Approximately 300 W continuous output power. Weight: Approximately 1.7 kg total device weight. Impact Rate at No-Load Speed: Variable from 0 up to approximately 48,000 bpm. 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.	2		
5.	Cordless drill	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		
6.	Jig Saw	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.	1		

7.	Miter Saw	Rated Input Power: Approximately 1,750 W maximum power consumption. 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. Cutting Capacity at 0°: Approximately 90 mm × 130 mm maximum cross-section. Cutting Capacity at 45° Mitre: Approximately 90 mm × 91 mm maximum cross-section. Cutting Capacity at 45° Bevel: Approximately 60 mm × 130 mm maximum cross-section. Tool Dimensions (W×L×H): Approximately 477 mm × 559 mm × 567 mm. No-Load Speed: Fixed at approximately 5,000 rpm. Weight: Approximately 11.1 kg.	1		
8.	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		
9.	Table saw	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 Weight24.4 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		
10.	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: upto 3,000 rpm Grinding wheel bore: 20 mm/2cm Grit 24, 60 or more Weight: 10 kg or less	1		

11.	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		
12.	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		
13.	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		
14.	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		
15.	Cordless Screw Driver	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 settings.	1		

16.	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 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		
17.	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 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		
18.	Planer	Rated Input Power: Not exceeding 710 W under nominal operating conditions. Planing Width: Approximately 82 mm effective width capacity. Planing 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 typically around 18,000 rpm.	1		
19.	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	1		

		of battery capacity.			
20.	Rotary Tool Kit	Rated Power Input: Approximately 175 W within nominal voltage range. Voltage: Operates within 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 multi chuck for rapid accessory interchange. Vibration Level: Approximately 18 m/s^2 measured vibration	2		
21.	Rubber Grip Hacksaw	Depth of Throat: Approximately 98 mm (3.85 inches) nominal depth. Blade Length: Around 254 mm (10 inches) standard length.	2		
22.	Hacksaw Mini	Blade Length: Approximately 10 inches nominal length. Handle Material: Constructed from metal as standard. Overall Length: Around 11 inches total length.	2		
23.	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		
24.	Ball Pein Hammer	Weight: Approximately 110 grams nominal weight. Dimensions: Around 32.6 cm × 10 cm × 2 cm (L × W × H) overall measurements.	2		
25.	Rubber mallet	Weight: Approximately 450 grams nominal weight. Dimensions: Around 33.6 cm × 9.6 cm × 6.2 cm (L × W × H) overall size.	2		
26.	Ring spanner set 12Pcs	Weight: 3.08 Kg nominal weight. Quantity: 12 pcs per set. Size: 6 mm to 32 mm overall range.	1		
27.	Open end spanner set 12Pcs	Weight: Approx1.74Kg nom.wt. Qty: 12pcs/set. Size: 6mm-32mm overall dims.	1		
28.	Combination Spanner set 8Pcs	Weight: Approx649g nom.wt. Qty: 8pcs/set.	1		
29.	Allen key set 10pcs	Hex Key Size: 1.5,2,2.5,3,4,5,5.5,6,8,10mm; Qty:10pcs/set	2		

30.	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		
31.	Combination plier	Weight: Approx422g nom.wt. Size: 8”/200mm nominal	2		
32.	Long nose plier	Weight: Approx399g nom.wt. Size:180mm/6" nominal	2		
33.	Circlip straight 5"	Weight: Approx399g nom.wt. Size:130mm/5" nominal	2		
34.	Circlip bent	"Weight: Approx399g nom.wt. Size:130mm/5"" nominal"	2		
35.	Diagonal Cutter	"Weight: Approx239g nom.wt. Size:180mm nominal"	2		
36.	Wire Stripper	Weight: Approx281g nom.wt. Size:130mm nominal	2		
37.	Adjustable spanner	Size: Upto 150 mm	2		
38.	Pipe wrench	Size: Max 300 mm	2		
39.	C – clamp	Size: Upto 75 mm	4		
40.	C-clamp	Size: Upto 150 mm	4		
41.	Snap- off Knife	Size:18 mmm	2		
42.	16pcs screw driver set	Pieces Per Set: 16 pcs	1		
43.	6pcs precision screw driver set	Pieces Per Set: 16 pcs	2		
44.	Max steel snip cutter	Length: 250 mm	2		
45.	PVC Pipe cutter	Length: 42 mm	2		
46.	Hot Glue Gun	Power: 40 W	4		
47.	Small file set	Length: 160 mm	2		
48.	Big file set	Length: 200 mm	2		
49.	Chisel set	Weight: 340 gm	2		
50.	Punch set	Weight: 390 gm	2		
51.	Bench wise	Base Type: Fixed Size:2–3½" nominal JawWidth:60mm	2		
52.	Router Bit Starter Kit	Pieces Per Set: 15 pcs	1		
53.	Drill bit set	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):205×115×55 overall	2		

54.	Baby wise	Vice Type: Bench Size:2" nominal JawWidth:50mm	2		
55.	Ratchet Set	Vice Type: Bench Sz:2" nominal; Jaw:50mm	2		
56.	Pegboard		5		
57.	Digital Vernier Caliper	Product Type: Digital Calliper Meas.Range:0–150mm / 0–6" Resolution:0.01mm	2		
58.	Micrometer	Resolution:0.001mm/0.00005" Meas.Range:0–25mm/0–1"	1		
59.	Steel Rule 300mm	Product Type: Steel Rule ScaleSize:12"/300mm Material: Stainless Steel	5		
60.	Steel Rule 600mm	Product Type: Steel Rule ScaleSize:24"/600mm Material: Stainless Steel	5		
61.	Engineering Square	Size:150×80mm nominal Material: Carbon Steel	2		
62.	Meter Tape 30m	Length: 30 m	1		
63.	Measuring Tape 3M	Length: 3 m	3		
64.	Measuring Tape 5M	Length: 5 m	3		
65.	Spirit Level	Vials:3 Accuracy:0.5mm/m Length:300mm Product Type: Level	3		

Annexure-4E

List of Consumables

1.	Goggle	Goggle – Industrial Standard Make	15		
2.	Apron	Apron - Standard Make	5		
3.	Ear Muff	Earmuff – Industrial Standard Make	5		
4.	Mask	Mask – Industrial Standard Make	50		
5.	Fire Extinguisher	Fire Extinguisher– Industrial Standard Make	6		
6.	First Aid Kit	First Aid Kit – Industrial Standard Make	2		
7.	Gloves Pair	Gloves – Industrial Standard Make	10		
8.	3D printer Filament	Weight Kg: 1 Approx Melt Flow Index: 2 (190°C/2.16kg) Nominal FilamentLength:330mApprox Dim Accuracy: +/-0.1mmApprox Roundness Accuracy: +/-0.5mmApprox SpoolInnerDia:55mmNominal SpoolOuterDia:200mmApprox SpoolWeight:300gNominal SpoolWidth:65mmApprox	10		
9.	Acrylic Sheet	3mm, 4ft x 4ft	20		
10.	Acrylic Sheet	4mm, 4ft x 4ft	20		
11.	Acrylic Sheet	5mm, 4ft x 4ft	20		
12.	Foam Sheet	8mm, 4ft x 4ft	2		
13.	Foam Sheet	10mm, 4ft x 4ft	1		
14.	Foam Sheet	12mm, 4ft x 4ft	1		
15.	Foam Sheet	15mm, 4ft x 4ft	1		
16.	Ply Board	5mm, 2ft x 4ft	12		
17.	Nylon Rod	10mm, 1m	5		
18.	Nuts	(3mm,4mm,5mm, 6mm,8mm,10mm, 12mm) Pack of 100	1		
19.	Bolts	(3mm,4mm,5mm, 6mm,8mm,10mm, 12mm) dia 1" Inch Pack of 100	1		
20.	Screws	(3mm,4mm,5mm) Pack of 100	1		
21.	Washers	(3mm,4mm,5mm, 6mm,8mm,10mm, 12mm) Pack of 100	1		

22.	Studs	(6mm,8mm) 1 Meter	2		
23.	Nails	(1",2",3",1.5",5") Pack of 100	1		
24.	Fevicol 2Kg		1		
25.	2 Way Tape		10		
26.	PVC Pipe	.75",10ft	10		
27.	PVC Pipe	1",10ft	10		
28.	PVC Pipe	1.5",10ft	10		
29.	PVC Pipe	2.0",10ft	10		
30.	Aluminium channels	(L, C, Box, strip length 12ft)	2		
31.	PCB Drill Bit	0.4mm	10		
32.	PCB Drill Bit	0.8mm	10		
33.	PCB Drill Bit	1mm	10		
34.	Drill Bit	4mm	10		
35.	Drill Bit	5mm	10		
36.	Drill Bit	6mm	10		
37.	Arduino UNO R3		5		
38.	Arduino NANO		5		
39.	Arduino Mega		3		
40.	Raspberry Pi Model 4B, 4GB		3		
41.	ESP8266 NodeMCU		2		
42.	ESP32 Development Board		12		
43.	NVIDIA Jetson Orin Nano Deployment Kit 8GB		2		
44.	IMU (MPU6050)		10		
45.	Camera Module (Raspberry Pi compatible)		5		
46.	830 Points Solderless Breadboard		5		
47.	400 Points Solderless Breadboard		5		
48.	Copper Clad Board single side		10		

49.	Copper clad board double side		10		
50.	Male to Male Breadboard Jumper		10		
51.	Female to Female Breadboard Jumper		10		
52.	Male to Female Breadboard Jumper		10		
53.	Beaglebone blu		1		
54.	Beaglebone Black		1		
55.	Voltage Regulator Module		2		
56.	Mini Micro submersible Water Pump		2		
57.	Piezoelectric Plate		2		
58.	8*8 LED Matrix Module		2		
59.	Bluetooth		2		
60.	7 Segment LED Display		2		
61.	GSM/GPRS/GPS Module		2		
62.	Laser Module		2		
63.	LDR Module		2		
64.	4×4 Matrix Keypad		2		
65.	Joy Stick Module		2		
66.	Active Buzzer (BIG)		2		
67.	Active Buzzer (SMALL)		2		
68.	Motor Driver		2		
69.	Sound Playback Module		2		
70.	BO Motors		10		
71.	Vibrating Motor		10		
72.	Capacitive Touch Switch		2		
73.	IR Sensors (Obstacle Sensors)		25		

74.	Triple Axis Magnetometer		2		
75.	Humidity Sensor		2		
76.	MQ-2		2		
77.	MQ-3		2		
78.	MQ-4		2		
79.	MQ-5		2		
80.	MQ-7		2		
81.	Ultrasonic Sensor Module		2		
82.	Triple Axis accelerometer		2		
83.	PIR Motion Detector Module		2		
84.	Pulse Rate Heart Sensor		2		
85.	Relay Module		2		
86.	Soil Moisture Sensor		2		
87.	Touch Sensor		2		
88.	Rain Drop Sensor		2		
89.	Flex Sensor		2		
90.	Temperature Sensor		2		
91.	Ultrasonic Sensors (HC-SR04)		20		
92.	Force Pressure Sensor		2		
93.	Colour Recognition Sensor		2		
94.	Water Flow Sensor		2		
95.	Sound Sensor		2		
96.	Line Following Sensor Arrays		10		
97.	IR Sensor Array for Line Following		2		
98.	Temperature & Humidity (DHT11/DHT22)		10		
99.	RFID Reader-Tags		2		
100.	RF Modules Tx& Rx 315 MHz ASK		2		

101.	Stepper motor with Driver Board		2		
102.	Servo Motor 360 rotation		10		
103.	Servo Motor 180 rotation		10		
104.	Metal Gear Servo Motor (180° Rotation)		10		
105.	Servo Motors (SG90)		20		
106.	DC Gear Motors with Wheels		20		
107.	Stepper Motors + Drives (A4988)		10		
108.	Motor Driver Modules (L298N)				
109.	2W/D 4WD Chassis Kits		10		
110.	Solder Wire 100grm		10		
111.	Solder Flux		10		