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**AICTE - IDEA LAB Project Equipment's List**

Details of specification of Project Equipment's are as follows:

S.No	Equipment	Specifications	Quantity
1.	CNC Router Machine	Model: 2513 Smart Drive. It should work on all sort of materials from wood to acrylic to plastic to even metals (mostly soft like aluminium). High Torque spindles are used to efficiently and precisely cut, mill and drill on various materials. Area: 1300 mm x 2500 mm x 200 mm (X, Y, Z), Tool kit Box, clamps, dust collection system. Spindle speed: 18000 RPM, Spindle Power: 4.5 kW, Control System: NK-105 G2/NK-280, Resolution: 0.025 mm, Machine Weight: 1100-1200kg	1
2.	Laser Cutter	Model: Laser 1309 Work Area: 4.25 x 3 feet Power: 80 watt / 60 watt	2
3.	3D Scanner	Portable/Stand mounting, High Accuracy and resolution, Hybrid geometry and colour-based tracking, software.	1
4.	3D Printer	Model: 3P 25 Multi head: Options to mount multiple independent heads for various material / camera / sensor heads. Adding multiple head enables printing in multiple materials and colours in a single print. Also enables clone and mirror prints.	5
5.	PCB Milling and PCB Prototype machine	-PCB Prototype machine should Include Laser system for processing PCB, Auto tool change model, High resolution with camera monitoring system. - Cuttable material modelling wax, Chemical wood, Foam, Acrylic, Poly acetate, ABS, PC Board X, Y and Z operations with simulation software	2 and 1 respectively
6.	Mixed Signal Oscilloscope	PC based 100 MHz, 200uv maximum sensitivity	2
7.	Digital Storage Oscilloscope	Hantek or Tektronix 200 MHz, 2 Channel Analog	2

8.	Vinyl Cutter	Model: Knife 36 Table Work Area: 6 feet X 3 feet	1
9.	Mini Desktop Lathe cum Milling	Model: Multi Desk	1
10.	Wood Lathe	Wood turning lathe 450mm, 500W/1200W Mini Lathe machine with speed selector	1
11.	Advanced, motorized Sewing Machine	Multi Stitch Designs Computerised Sewing Machine	1
12.	Drilling Machine	1 HP Motor with accessories	1
13.	Handheld high speed drilling machine	15000 RPM with accessories	1
14.	Benchtop Grinder Machine	Wattage: 350 W, 3000 rpm	2
15.	Solder stations	Digital display / Controlled Temperature 45W/85W	5
16.	De-soldering Machine	Microprocessor controlled 140 W de- soldering station with temperature range from 160 to 480 °C.	2
17.	Power Tools	DeWalt DCH273P2-GB 18V XR Brushless SDS Hammer Drill Driver	2
18.	Portable Welding Machine	IGBT Welding Machine 200A	2
19.	Refrigerator	250+ L Refrigerator	1
20.	Microwave Oven	60L Smart Oven	1
21.	Magnifying glass with stand	- WORISON helping hand adjustable auxiliary clip magnifying glass with 5 LED lights. - Magnifying Glass with Light, 10X Handheld Large Magnifying Glass 12 LED Illuminated Lighted Magnifier	4 and 6 respectively.
22.	Variable Power Supply	DC Regulated variable adjustable digital power supply 0-30V / 3A	5
23.	Benchtop Multi-meter	Digital Multi-meter True RMS- Mini Benchtop USB Interface, 6.5-digit resolution, dc accuracy of up to 0.0024% dual display, 100 uA to 10A current range. Fluke 45 and Agilent 34401A emulation, Graphical display.	5
24.	Projector	Epson EB-FH06 Full HD 1080p Projector, V11H974056 or its equivalent.	2
25.	Heavy Duty Laser Printer	Multi-function monochrome laser printer with auto duplex printing, Connectivity - USB, 30PPM, auto compatible laser toner.	2
26.	Computer workstations	Workstation for CAD - Intel® Core™ i7- 9700 with Intel® UHD Graphics 630 (3.0 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 8 cores).	5

		4K UHD, 32", 3840x2160, 16:9, 60Hz, IPS, 4ms GTG, HDMI/DisplayPort/Mini Display Port/USB, 5 W Speakers.	
27.	Quadcopter Assembly Kit	Heavy, including battery. PCB QUADCOPTER FRAME KIT, Heavy Lift Hexa-Copter Frame. Combo Drone With 4k Video Recording.	5
28.	Smart Board	55-inch 10-point touch screen IFP panel for teaching, in built speaker, Android interface, play media.	1
29.	Relay modules (Ethernet controlled relay, Bluetooth controlled relay, Wi-fi controlled relay 8 channel)	Smart Control Relay 8 channel Board Ethernet / Wi-fi / Bluetooth programmable / API enabled / Timer.	10
30.	GPIO Module	Smart Control GPIO Board Ethernet / Wi-fi / Bluetooth programmable / API enabled / Timer / PWM	10
31.	Electric Bicycle Motor & Accessories	Complete Kit.	2
32.	Granite Surface Plate (630 x 630 x 80 mm grade "O").	630 x 630 x 80 mm grade "O" Stand with level and stand.	2