

Sr. No.	Category	Name	Description	Compiled/ Not Compiled	Qty (In Units)	Unit Price	Total Price
11	Electronics Development	Water Pump module	DC12V 3W Submersible Water Pump	Yes/No	02		
12	Electronics Development	Piezoelectric Plate	Normal Copper based 4 cm Diameter approx.	Yes/No	05		
13	Electronics Development	8*8 LED Matrix Module	Max7219 Dot LED Matrix Module Mcu Control LED Display Module	Yes/No	05		
14	Electronics Development	Bluetooth	HC 05 Working voltage 5 Volt	Yes/No	05		
15	Electronics Development	7 Segment Led Display	LED 4-Digit Display Module w/ Clock Point / 4Pin Dupont Line for Arduino (20 cm)	Yes/No	04		
16	Electronics Development	GSM	Sim800L Gprs Transfer Board Micro Sim Gsm Core Ttl Port Module for Arduino	Yes/No	02		
17	Electronics Development	GPS	GY-NEO6MV2 new GPS module	Yes/No	02		
18	Electronics Development	Laser Diode	650Nm 6Mm 5V Dc 5Mw Mini Laser Dot Diode Module	Yes/No	05		
19	Electronics Development	LDR Module	Photosensitive LDR Light Sensor Module	Yes/No	10		
20	Electronics Development	Keypad	Universal 16 Key Switch Keypad	Yes/No	04		
21	Electronics Development	Joy Stick	Joystick Module for Arduino	Yes/No	04		
22	Electronics Development	Active Buzzer	small 5 volt	Yes/No	20		
			big 5 volt	Yes/No	10		
23	Electronics Development	Motor driver	L293d	Yes/No	10		
24	Electronics Development	Sound Playback Module	Voice Board Recording Recorder Playback Module on Board Microphone with Mic Sound Audio Loudspeaker	Yes/No	04		
25	Electronics Development	BO Motors With Wheel	Side Shaft BO Motor	Yes/No	12		
26	Electronics Development	Node MCU / Wemos D1	WIFI Internet Development Board Module Node MCU	Yes/No	05		

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27	Electronics Development	Vibrating Motor	Vibrating Motor	Yes/No	10		
28	Electronics Development	Battery clips with DC Jack	9-volt battery clips with DC Jack	Yes/No	10		
29	Electronics Development	Hookup Wires	Red & Black set 100 Meters each	Yes/No	02		
30	Electronics Development	Jumper Cable	Male-Male	Yes/No	300		
			Male-Female	Yes/No	200		
			Female-Female	Yes/No	100		
31	Electronics Development	RGB LEDs	Regular 5mm 3-5-volt Range	Yes/No	50		
32	Electronics Development	LEDs (Red)	Regular 5mm 3-5-volt Range	Yes/No	200		
33	Electronics Development	LEDs (Green)	Regular 5mm 3-5-volt Range	Yes/No	200		
34	Electronics Development	LEDs (Blue)	Regular 5mm 3-5-volt Range	Yes/No	200		
35	Electronics Development	LEDs (Yellow)	Regular 5mm 3-5-volt Range	Yes/No	200		
36	Electronics Development	LEDs (White)	Regular 5mm 3-5-volt Range	Yes/No	200		
37	Electronics Development	Diode	Different Basic Diodes kit	Yes/No	02		
38	Electronics Development	Push Button Switch	Tactile Switch Micro - Push to On Button	Yes/No	50		
39	Electronics Development	555 timer IC	555 timer IC	Yes/No	20		
40	Electronics Development	MPR121	Capacitive Touch module	Yes/No	05		
41	Electronics Development	Capacitive Touch Switch	Capacitive Touch Switch	Yes/No	05		
42	Internet of Things & Sensors	IR Sensors, Obstacle avoider sensor	Detection range, detection angle	Yes/No	20		
43	Internet of Things & Sensors	Triple Axis Magnetometer	3-Axis Magneto-resistive Sensors I2C Digital Interface Integrated 12-bit ADC Range of -8 to +8 Gauss 160 Hz Maximum Output Rate	Yes/No	05		
44	Internet of Things & Sensors	Humidity Sensor	Operating range: 20 - 95 % RH, Temperature: 0 - 60 Celsius, Power supply: 1.5V AC (Max sine) Operating frequency: 500Hz - 2kHz	Yes/No	02		

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45	Internet of Things & Sensors	MQ Series	MQ-4 Methane Natural Gas Sensor	Yes/No	02		
			MQ-3 Alcohol - Ethanol Sensor	Yes/No	02		
			MQ-7 High Sensitivity CO Carbon Monoxide Sensor Detector	Yes/No	02		
			MQ - 2 Smoke Detection	Yes/No	02		
			MQ-135 Air Quality Sensor	Yes/No	02		
46	Internet of Things & Sensors	IR (transmitter) receiver TSOP Module	Switching rate – 38 KHz	Yes/No	05		
47	Internet of Things & Sensors	Ultrasonic Sensor Module HC-SR-04 or compatible	Power supply, Quiescent current, Working current, Effectual angle, Ranging distance, Resolution Working angle & dimension	Yes/No	10		
48	Internet of Things & Sensors	Triple Axis accelerometer	3-axis sensing Small, low profile package 4 mm × 4 mm × 1.45 mm LFCSP Low Power: 350 μA (typical) Single-supply operation: 1.8 V to 3.6 V Temperature stability	Yes/No	05		
49	Internet of Things & Sensors	PIR Motion Detector Module	High digital pulse when motion detected Low digital pulse when idle /no motion detected Sensitivity range (up to 6 m) Power supply: 5V-12V	Yes/No	05		
50	Internet of Things & Sensors	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based wore on the finger or earlobe Working voltage 3-5V	Yes/No	02		
51	Internet of Things & Sensors	Relay Module	5V 10A 2 Channel Relay Module	Yes/No	10		

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52	Internet of Things & Sensors	Soil Moisture Sensor	Soil Moisture Detection Humidity Sensor Module	Yes/No	02		
53	Internet of Things & Sensors	Touch Sensor	Capacitive Touch Sensor Module	Yes/No	02		
54	Internet of Things & Sensors	Metal touch sensor module		Yes/No	02		
55	Internet of Things & Sensors	Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module	Yes/No	02		
56	Internet of Things & Sensors	Flex Sensor	Flex Sensor 2.2 Inches	Yes/No	02		
57	Internet of Things & Sensors	Temperature Sensor	Temperature Sensor Lm35	Yes/No	05		
58	Internet of Things & Sensors	Force Pressure Sensor	force sensitive resistor with a square, 1.75x1.5", sensing area	Yes/No	02		
59	Internet of Things & Sensors	Color Recognition Sensor	TCS3200 Color Recognition Sensor	Yes/No	02		
60	Internet of Things & Sensors	Water Flow Sensor	Arduino Compatible	Yes/No	01		
61	Internet of Things & Sensors	Sound Sensor	Sound Sensor Module, Microphones module	Yes/No	02		
62	Internet of Things & Sensors	IR Sensors Array for Line Following	IR Sensors Array for Line Following	Yes/No	05		
63	Internet of Things & Sensors	10000 Mh 5 volt Power Bank	10000 Mh 5 volt Power Bank	Yes/No	02		
64	Internet of Things & Sensors	RFID Reader – Tags	Current :13-26mA / DC 3.3V Idle Current :10-13mA / DC 3.3V Sleep Current<80uA Peak Current<30mA Operating Frequency: 13.56MHz<30mA Read range between 20 cm to 1 m	Yes/No	02		
65	Internet of Things & Sensors	RF Modules Tx & Rx 315 MHz ASK	Frequency Range: 433.92/315 MHz Supply Voltage: 3 – 6 V Output Power : 4 – 16 Dbm Low power consumption Easy application	Yes/No	05		

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66	Robotics	Stepper motor with Driver board	28BYJ-48 ULN2003 5V Stepper Motor + ULN2003 Driver Board	Yes/No	05		
67	Robotics	DC motor	12V DC Gear 150 RPM	Yes/No	10		
68	Robotics	Servo motors	Position Servo Angle based Metal Gear	Yes/No	04		
			Small Servo Metal Gear	Yes/No	04		
			Continuous Metal Gear Servo 360	Yes/No	04		
			Small Servo Plastic Gear	Yes/No	10		
69	Robotics	150 RPM BO Motor	150 RPM BO Motor	Yes/No	10		
70	Robotics	L298P Motor Driver	L298P Motor Driver Shield or relative Driver Shield	Yes/No	05		
71	DIY Kit	Drone Kit	Pluto Drone Kit	Yes/No	02		
72	DIY Kit	4 Wheel Robotic Kit	Arduino Based (Open Source) + 4 Wheels + 4 Motors (12 V) + Adafruit Driver Shield + Full Acrylic Chassis + Arduino	Yes/No	05		
73	DIY Kit	STEAM Paper Circuits Kit	Paper circuits are a great way of adding light to your drawings, origami, or paper craft creations. Instead of using wires to connect a battery to LEDs, paper circuits use conductive metal tape.	Yes/No	10		
74	DIY Kit	Tinker N Design 3D Pen Kit	Tinker 'N' Design Kit is an activity-based 3D Pen Kit to explore the basic concepts of 3D Modelling and Design Thinking. The kit provides online video support and few ready to start activities to kick start the creativity and learning among the children of a very tender age.	Yes/No	10		

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75	DIY Kit	Tinker Orbit Kit (AI & IoT Enabled Kit)	Tinker Orbits is a STEAM kit to explore the basic concepts of electronic circuits, sensors, logics and programming with the help of plug 'n' play modules.	Yes/No	10		
76	DIY Kit	Breadboard Based Electronics Kit	Activities based on this kit give a basic idea of making basic circuit to solve real time problems like Burglar alarm, street light, lift model, hand dryer etc which can be directly mapped with physical world.	Yes/No	20		
77	DIY Kit	Block Based Power Screw Kit	Teaches about art of designing and quick construction.	Yes/No	10		
78	DIY Kit	Block Based Gear Box Kit	Gears and wheels with teeth. They are simple machines that harness force. Bicycles, non-digital clocks, wind-up toys, and many other machines work with gears. Machines typically use two or more gears of different sizes; one gear is often larger than the other. Understand Gears and builds your own motorized gear changing cars. Can easily and quickly construct the models and dismantle too.	Yes/No	10		
79	DIY Kit	Block Based Discovering Motion Kit	This course makes it easier for kids to understand the basics of Physics. These concepts that they learn helps them throughout their learning about science	Yes/No	05		

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80	DIY Kit	Block Based Logic Blocks Kit	With the help of PCB integrated blocks, this kit encourages significant creative risk-taking and experimentation in kids.	Yes/No	05		
81	DIY Kit	Mechatron Kit	Assembling based metal kits to make more than 15 models. With the help of these kits students can learn, how to use metal blocks/plates to make different kind of robotic models. These activities embed creativity among students and lead to think out of the box.	Yes/No	10		
82	Rapid Prototyping Tools	Arctic 3D Printer Kit and tools – IoT Enabled	Printer Type: FDM (Fused Deposition Modeling) Minimum Dimensions: 250mm*280mm*250mm Build Size. Nozzle: 0.3mm to 0.4mm nozzle diameter Slicing Software are Free or Open Source. Full Graphics LCD Screen UI that displays print metrics Good quality anti-bacterial fungal cover, Wireless Printing & Control, Status Lights, Camera for Live Streaming, Dual Layer Cooling Fan	Yes/No	01		
83	Rapid Prototyping Tools	Filament for 3D printer	Compatible 700/1000 Grams Filament	Yes/No	05		
84	Rapid Prototyping Tools	Filament Storage Box		Yes/No	02		
85	Mechanical Tools	Allen Key Set	10 Piece Ring Imperial Allen Hex key	Yes/No	01		
86	Mechanical Tools	Drill Machine		Yes/No	01		
87	Mechanical Tools	Wire Strippers	Wire Stripper Cutter Plier With Spring -26x6x20 Cms (LxWxH)	Yes/No	02		
88	Mechanical Tools	Screwdriver	Multi-purpose	Yes/No	02		
89	Mechanical Tools	Tool Set	Multi-purpose	Yes/No	01		

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90	Mechanical Tools	Drill Bit Set	High Quality 13 Pcs HSS Drill Bits Set For for Wood, Iron, Aluminum, Plastic etc	Yes/No	01		
91	Mechanical Tools	Plastic Tool Box with Organizer	For Keeping tools	Yes/No	01		
92	Mechanical Tools	Peg Board	Peg board System to mount tools on wall	Yes/No	02		
93	Electric Tools	Hot glue gun	Range in open space (Standard Conditions)	Yes/No	02		
94	Electric Tools	Soldering Kit	Variable Wattage of Soldering Iron: 15-30 watts/230 volts Soldering Iron Temperature Range: 280°C to 450°C	Yes/No	01		
			De-Soldering Pump, Soldering Flux (Paste) ,DE-soldering Copper Braid	Yes/No	01		
			(Solder Wick)	Yes/No	02		
			Soldering Wire: 20/22 AWG soldering Wire with rosin core flux (100 Grams)	Yes/No	04		
95	Electric Tools	Adapters	DC power Adapter with 5V, 12V	Yes/No	10		
96	Measurement Tools	Digital Multi Meter	A. Digital Multi Meter Voltage Current Resistance-7 functions + 19 ranges to cover DC voltage 200mV to 1kV B. AC voltage 200 V - 750 V C. DC current 200 μ A - 10 A D. Resistance 200 -2 M Ohm and Transistor & diode test.	Yes/No	02		
97	Power Supply & accessories	Glue Sticks	11 mm x 200mm Hot Melt Glue Stick	Yes/No	30		
98	Power Supply & accessories	Nuts and Bolts and screw	Various Size 20 each	Yes/No	10		
99	Safety equipment	Safety goggles (with/ without LED torch)	Safety Goggles for Chemical Splash and Smoke from Soldering	Yes/No	04		
100	Safety equipment	Safety Gloves Pairs	Latex Coating Gloves (Medium Size)	Yes/No	03		
101	Safety equipment	Safety Mask	Filtering efficiency ranging 80 percent when tested against 0.3-micron sodium chloride particle	Yes/No	05		

Note :-

- (i) Vendor must provide own developed learning management software and teacher learning keys for a classroom of 30-40 students for One Year.
- (ii) Vendor must provide proper installation, commissioning & training for the supplied items at APS Dhar Road.
- (iii) Warranty period.
- (iv) Duration of Warranty Period
- (v) Replaceable and Non replaceable items during warranty Period.
- (vi) Services provided in warranty period and without warranty period with charges
- (vii) Provision of Training Session.
- (viii) Number of Free Training session.
- (ix) Charges of training session on payment basis.