

PACKAGE 1

SL NO.	CATEGORY	NAME	SPECIFICATION	QTY	Acceptance
1	Electronics Development	Arduino Uno or Equivalent	Atmega 328p – 8 bit AVR family microcontroller, equivalent or better Operating Voltage: 5V Digital I/O Pins: 14 (of which 6 provide PWM output) PWM Digital I/O Pins: 6 Accessories: Case Shell enclosure, compatible USB Cable (length-6 inch or more)	30	
2	Electronics Development	Arduino Uno or Equivalent	Atmega 328p – 8 bit AVR family microcontroller, equivalent or better Operating Voltage: 5V Digital I/O Pins: 14 (of which 6 provide PWM output) Analog Input Pins: 8 Accessories: Compatible USB cable (length-6 inch or more)	10	
3	Electronics Development	Arduino Mega or Equivalent	Atmega 2560P-8 bit AVR family Microcontroller, equivalent or better Operating Voltage: 5 V Digital I/O Pins: 54 (of which 6 provide PWM output) Analog Input Pins: 16 Accessories: Case Shell enclosure; compatible USB cable (length- 6 inch or more)	10	
4	Electronics Development	Raspberry Pi3 Model B+	RASPBERRY Pi 3 MODEL B+ equivalent or better Accessories: MicroSD card-32GB, USB 3.0 Cable (1 meter), HDMI to VGA-1, HDMI to VGA adapter, Case shell enclosure	5	
5	Electronics Development	General Purpose	Solderless 400 Pin Breadboard	30	
			Solderless 800 Pin Breadboard	20	
			Self Adhesive Proto Shield	20	
			FR2 A Grade Material (140X90mm)	30	

6	Electronic Development	Solderable Board	FR2A Grade Material (80*55mm)	30	
		Berg Strips	Female Berg Strip, 2.54mm pitch, 40 pin single row, breakable pin Male Berg Strip, 2.54 mm pitch, 40 pin single row, breakable pin	30	
7	Electronics Development	16x2 LCD Display	Dot matrix LCD Display, 16 charactersx2 lines, 12C	20	
8	Electronics Development	USB Cables	USB Cables Set (A to B, 12 inch or more)	10	
		USB Cables	USB Cables Set (Mini, 12 inch or more)	10	
9	Electronics Development	Battery	9-12V 2000 to 2500 mAh rechargeable battery with 2 chargers, Equivalent or better	10	
10	Electronics Development	Resistor Kit	One Kit contains-30 Carbon Film Resistors of 20 different resistance values each assorted, packaged together and labelled Wattage: 0.125W to 1W Values: 0Ω, 1.5Ω, 4.7Ω, 100Ω, 220Ω, 330Ω, 470Ω, 680Ω, 1KΩ, 2.2Ω, 3.3 Ω, 4.7K Ω, 10KΩ, 22KΩ, 47KΩ, 100KΩ, 330K Ω, 1M Ω	20	
11	Electronics Development	Capacitor Kit	One Kit contains-20 Electrolytic capacitors of 10 different capacitance values each. Assorted, packaged together and labelled. Values: 10pF, 22pF, 100pF, 1nF, 10nF, 100nF, 1μF, 10μF, 100μF, 1000μF	20	
12	Electronics Development	Linear Voltage regulator	7805 7812 7809	30	
13	Electronics Development	Water Pump Module	DC 12V, 3W submersible water pump	4	
14	Electronics Development	Piezoelectric Plate	Normal Copper Based 4CM Diameter approx.	30	
15	Electronics Development	8*8 LED Matrix Module	Max 7219 DOT LED Matrix Module MCU Control LED Display Module	10	
16	Electronics Development	Bluetooth	HC 05 Working Voltage Rating: 5V	15	
17	Electronics Development	7 Segment LED Display	LED 4 Digit Display Module Voltage Rating: 2.4 V to 5.5 V 4 Pin Interface: Vcc, Gnd, Data, Clock	20	
18	Electronics Development	GSM	Sim 900 GPRS Transfer Board Micro Sim GSM Core TTL Port Module for Arduino	4	
19	Electronics Development	GPS	GY-NEO6NV2 new GPS Module	4	
20	Electronics	Laser Diode	650Nm 6Mm 5V DC 5Mw Mini Laser Dot Diode Module	10	

	Development	Emitter				
21	Electronics Development	LDR Module	5mm/12mm, Photosensitive LDR Light Sensor Module		30	
22	Electronics Development	Keypad	Universal 16Key Switch Keypad		10	
23	Electronics Development	Joystick Module for Arduino	2-Axis Joystick with pushbutton function		10	
24	Electronics Development	Active Buzzer	Small 5 Volt		40	
25	Electronics Development		Big 5 Volt		40	
26	Electronics Development	Motor Driver Module	L293d		10	
27	Electronics Development	Sound Playback Module	ID1820 voice recording module or equivalent		10	
28	Electronics Development	DC Plastic Gear motor with wheel	12V, 150RPM, Side Shaft BO (Battery Operation)Motor		40	
29	Electronics Development	Node MCU	ESP 8266 I2C, 1 wire; Plug & Play		6	
30	Electronics Development	WeMos D1R2	WeMos D1R2 with WiFi ESP 8266 Operating Voltage:5V		6	
31	Electronics Development	Vibrating Motor	Weight: 10 Grams Operating Voltage: 1.5 V to 3V		20	
32	Electronics Development	Alligator Connectors	Multi ColourAlligator Connectors- 12inch		200	
33	Electronics Development	Battery Clips with DC Jack	9 volt battery clips with DC Jack		40	
34	Electronics Development	Hook-up Wires	Red & Black set 100 meters each		4	
35	Electronics Development	Jumper Cable	Male-Male		1000	
			Male-Female		600	

			Female-Female	400	
36	Electronics Development	RGB LEDs	Regular 5mm 3-5 Volt Range	400	
37	Electronics Development	LEDs(RED)	Regular 5mm 3-5 Volt Range	1000	
38	Electronics Development	LEDs(Green)	Regular 5mm 3-5 Volt Range	1000	
39	Electronics Development	LEDs(Blue)	Regular 5mm 3-5 Volt Range	1000	
40	Electronics Development	LEDs(Yellow)	Regular 5mm 3-5 Volt Range	1000	
41	Electronics Development	LEDs(White)	Regular 5mm 3-5 Volt Range	1000	
42	Electronics Development	Timer IC- LM555	LM 555 Timer IC	30	
43	Electronics Development	ATMEGA 16U 2	8 bit microcontroller individual IC (DIP) Voltage range: 2.7V to 5.5V Operational range: 40C to 80C	10	
44	Electronics Development	Diodes and Transistors Kit	One Kit contain- 25Assorted Basic Diodes of 4 different types each. Types :NPN Transistor: 2N3906, BC 547 PNP Transistor: 2N3906, BC557 Silicon Diode-1N4148, Power Diode-1N4004/4001. Equivalent or better. Wattage: 1W, Current rating : 1A Assorted Kit packaged together and labelled.	3	
45	Electronics Development	Button Switch Set	One Kit contains-100 buttons of different types. Types: Push, Toggle, rotary, selector and slide switch, Assorted kit packaged together and labelled.	3	
46	Electronics Development	Capacitive Touch Module	MPR 121 with 12C. Voltage Range: 2.5V to 3.6 V DC	20	
47	Electronics Development	Capacitive Touch switch Module	Digital capacitive Touch Switch Module- TTP223B Voltage Range:2V to 5V DC	10	
48	Internet of Things & Sensors	IR Sensors (Obstacle Avoider Sensor Module)	LM393 Detection Distance: 2-30cm Detection Angle:30-40	20	

49	Internet of Things and Sensors	Triple Axis Magnetometer	3-Axis Magnetoresistive Sensors 12C Digital Interface Integrated 12-bit ADC Range of -8 to +8 Gauss 160Hz Maximum Output Rate	10	
50	Internet of Things and Sensors	Humidity Sensor	Operating range:20-95% RH	10	
			Temperature:0-60 Celsius		
			Power supply: 1.5V AC(Max sine)		
			Operating frequency:500Hz-2KHz		
			MQ-2 Smoke Detection		
			MQ-3 Alcohol Ethanol Sensor		
			MQ-4 Methane Natural Gas Sensor		
51	Internet of Things and Sensors	MQ-Series	MQ-5 Methane Liquefied Gas Sensor MQ-6 Liquefied Petroleum Gas Sensor MQ-7 High sensitive Co Carbon Monoxide Sensor Detector MQ-8 Hydrogen Gas Sensor MQ-135 Air Quality Sensor	3	
52	Internet of Things and Sensors	IR (transmitter receiver)	TSOP 1738, Switching Rate-38 KHz Voltage rating : 5V	10	
53	Internet of Things and Sensors	Ultrasonic Sensor Module HC-SR-04	Working Voltage-DC 5V Working Current-15mA Working Frequency-40 Hz Range-1cm to 4 m Effectual Angel-<15 degree Measuring Angle-30 degree Resolution-0.3 cm	40	
54	Internet of Things and Sensors	Triple Axis Accelerometer	3-axis sensing Small, low profile package 4mmx4mmx1.45 mm LFCSP Low Power: 350microA, Single Supply Operation: 1.8V to 3.6 V, Temperature Stability	10	
55	Internet of Things and	PIR Motion Detector	High digital pulse when motion detected Low digital pulse when idle/ no motion detected.	20	

	Sensors	Module	Sensitivity range (up to 6m) Power supply: 5V-12V		
56	Internet of Things and Sensors	Pulse Rate Heart Sensor	Pulse Rate Sensor Finger Based Wore on the Finger or Earlobe Working Voltage:3-5V	4	
57	Internet of Things and Sensors	Relay Module	5V 10A-2 Channel Relay Module	20	
58	Internet of Things and Sensors	Relay Module	5V 10A-1 Channel Relay Module	20	
59	Internet of Things and Sensors	Big Sound Microphone Module	Large Electret capsule sound Module	10	
60	Internet of Things and Sensors	Soil Moisture Sensor Module	FC-28 LM 293 comparator, Operating Voltage:3.3V to 5V	6	
61	Internet of Things and Sensors	Touch Sensor	Capacitive Touch Sensor Module. TTP22X series. Voltage Range:2.4V to 5.5V	6	
62	Internet of Things and Sensors	Metal Touch Sensor Module	KY-036 or equivalent metal touch sensor module	6	
63	Internet of Things and Sensors	Rain Drop Sensor	Rain Sensitive, Rain Drop Detection Sensor Module. Voltage Range: 3.3V to 5.5 V Size: 5mm x40mm or equivalent	6	
64	Internet of Things and Sensors	Flex Sensor	Flex Sensor 2.2 inches	6	
65	Internet of Things and Sensors	Temperature Sensor	Lm35. Full Range Temperature sensor. Voltage range: 4V to 30V, Error: 0.5 degree C	6	
66	Internet of Things and	Temperature and Humidity	DHT 11, Voltage Range: 3 V to 5V	40	

	Sensors	Sensor Module			
67	Internet of Things and Sensors	Force Pressure Sensor	Force sensitive resistor with a square, 1.75x1.5", sensing Area	4	
68	Internet of Things and Sensors	Colour Recognition Sensor	TCS3200 Colour Recognition Sensor	4	
69	Internet of Things and Sensors	Water Flow Sensor	Arduino Compatible Water Flow Sensor. 5V DC Input	4	
70	Internet of Things and Sensors	Sound Sensor	Sound Sensor Module, Microphones Module	10	
71	Internet of Things and Sensors	IR Sensor Array Module for Line Following	8 IR Sensor Array Module for Line Following. Operating Voltage 5V	10	
72	Internet of Things and Sensors	Power Bank	10000mAh 5- Volt Power Bank	5	
73	Internet of Things and 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:1.3.56MHZ<30mA Read range between 20cm to M	10	
74	Internet of Things and Sensors	RF Modules Tx&Rx 315 MHz ASK	Frequency Range:433.92/315MHz Supply Voltage: 3-6V Output power: 4-16Dbm Low Power Consumption Easy application	10	
75	Robotics	Stepper motor with Driver Board	28BYJ-48 ULN2003 5VStepper Motor + ULN2003 Driver Board	10	

76	Robotics	DC Motor	12 V DC Gear 150 RPM	20	
77	Robotics	Servo Motors	Position Servo, Angle based Metal Gear (S-3003)	10	
			Small Servo Metal Gear (MG90S)	10	
			Continuous Metal Gear Servo (MG995)-360	10	
78	Robotics	150RPM BO Motor	Small Servo Plastic Gear (SVG-90)	40	
79	Robotics	L298P Motor Driver	150 RPM BO Motor	10	
80	Robotics	Servo Motor Testor	L298P Motor Driver Shield or relative Driver Shield	10	
81	DIY Kit	Robotics DIY Kit	CCPM 3 Channel Servo Tester	4	
82	DIY	Mechanical (Modular Construction Kit)	Robotics DIY Kit with programmable	3	
83	STEM Learning/Application Kit	Drone Kit	Metal/Plastic mechanical construction kit compatible with electronic equipment	5	
		Aerospace Kit		1	
		Automobile Kit		1	
		Bio-medical Kit		1	
		Agritech Kit		1	
		Water/Sanitization Kit		1	
		Bio Tech Kit		1	
Other Potential STEM Application Kit	1				
SI No.	Category	Name	Description	Qty	
1	Rapid prototyping	3D Printer Kit and tools	Printer type: FDM (Fused Deposition Modelling) Minimum Dimensions: 160 MM*160mm Build Size or 4 Litre build volume. Nozzle: 0.3mm to 0.4mm nozzle	1	

	Tools		diameter. Slicing Software should be free or Open source, LCD Screen UI that displays Print metrics, Good Heated Print Bed, Material compatibility- PLA, ABS, and derivatives of PLA, Ninjabflex. Quality Anti-bacterial/fungal Cover. Repair Kit- with spare springs, screws, keys, tweezers etc.		
2	Rapid prototyping Tools	Dedicated UPS/Power back up	Dedicated UPS / Power back up with a 2 hour battery back atleast	1	
3	Rapid prototyping Tools	Filament for 3D printer	Compatible 1000 Gms Filament in 5different colours	5	
4	Rapid prototyping Tools	Filament Storage Box	Compatible Filament Storage Box	5	
5	Rapid prototyping Tools	Set of Arts & Crafts Accessories- stationary items and basic prototyping material	Cardboard	5	
			Foam Core Boards	5	
			20 m Spool of thick strings various colour	5	
			Rubber band	100	
			Popscicle Sticks	100	
		Wood Glue Bottle-500ml		2	

Sl NO.	Category	Name	Description	Qty	
1	Mechanical Tools	Hacksaw Frame	Size: 12 inches	1	
2	Mechanical Tools	Hacksaw blades	Size: 12 inches	10	
3	Mechanical Tools	Mini Hacksaw	Size: 6 inches	1	
4	Mechanical Tools	Mini Hacksaw blades	Size:6 inches	10	
5	Mechanical Tools	Pliers:4.5 inches size	External Straight Plier	1	
			Nose Circclip Plier	1	

			Long Nose Plier	1	
			Combiantion Mini Plier	1	
			Wire Stripping Pliers	1	
			Bent Nose Pliers	1	
			Needle Nose Pliers	1	
6	Mechanical Tools	Tweezer Set	6 PC Non-magnetic tweezer Set Size-6 inches	1	
7	Mechanical Tools	Ball Pein Hammer	Ball Pein Hammer Weight-0.75KG	1	
8	Mechanical Tools	Steel Shaft Claw Hammer	Claw Hammer Steel Shaft Weight-0.75 Kg	1	
9	Mechanical Tools	C-Clamp	Metal Clamp 3" Size	1	
10	Mechanical Tools	Allen Key Set	10 Piece Ring Imperial Allen Hex Key	1	
11	Mechanical Tools	Drill Machine Set	Drill Machine with accessories Hammer/ Screw and clockwise/ anticlockwise modes. Power:200 W Chuck capacity -1 to 10 mm Drill bits- Masonry, metal, Wood	1	
12	Mechanical Tools	Drilling Workstation	Drill press, Drill Holder and Rotary tool, Compatible with drilling Machine provided	1	
13	Mechanical Tools	Spanner Set	12 Piece combination spanner set range-4mm to 30 mm	1	
14	Mechanical Tools	Vice Normal	Table Top vice	1	
15	Mechanical Tools	Precision Screw Driver Set	6 Piece precision Screw Driver Set Types: PH0, PH1, Flat Head-1.1mm, 2mm, 2.4mm, 3mm	2	
16	Mechanical Tools	Wrench	Adjustable Universal Multi Wrench spanner	2	
17	Mechanical Tools	Wire Strippers	Wire Stripper Cutter Plier with Spring- 26x6x20 cms(LxBxH)	5	
18	Mechanical Tools	Screw driver	40 pc Multi purpose Screwdriver set	3	
19	Mechanical	Cordless	Cordless Rotary multitool with all cutting, grinding, polishing, engraving and drill	1	

	Tools	Rotary Multitool set	bits. Speed: Adjustable up to 30000 RPM Battery Type: Li-ion Voltage/ current range: 8-10V, 0-2A		
20	Mechanical Tools	Air Blower	500W or More, Variable Speed blower		
21	Mechanical Tools	Drill Bit Set	High Quality 13 PCs HSS Drill Bits Set for Wood, Iron, Aluminium, Plastic etc.		
22	Mechanical Tools	File Set	6 PC File Set Working length-6 inch		
23	Mechanical Tools	Mini File Set	6 PC Mini File Set Working length -3 inch		
24	Mechanical Tools	Flexible Cutting Mat Plastic Tool	A3Size with marked Patter and Grids (18"x12")		
25	Mechanical Tools	Box with Organiser	Number of Drawers: 60 or Equivalent		
26	Mechanical Tools	Pegboard	PegBoard System to mount tools on wall with attachments. Size: 3Ft*2Ft		
27	Electric Tools	Hot Glue Gun	Works with standard 0.5 inch glue sticks. Temperature-230 to 280 degree celcius		
28	Electric Tools	Digital oscilloscope	Minimum Bandwith:50 Mhz. Minimum number of channels:2 channels. Sample Rate: 1 Gsa/s with inbuilt waveform function generator	1	
29	Electric Tools	Soldering Kit	Variable wattage of Soldering iron :15-30 satts/230 Volts Soldering Iron Temperature Range 280° C to 450° C, De-Soldering Pump, Soldering Flux(Paste) 100 grams, De-Soldering Copper Braid(Soldering Tip-bevel, Chisel, Conical-5 each per kit. Soldering Wire: 20/22 AWG soldering Wire with Rosin Core Flux (100Gms)	4	
30	Electric Tools	Adapters	DC power Adapter with 5V, 2A	10	
31	Electric Tools	Adapters	DC power Adapter with 12V, 2A	10	
32	Electric Tools	Electric Screw Driver Set	Multipurpose Electric Screwdriver set. Accessories- Compatible bits. Mode- Wireless Battery-Li-ion 3.6V or equivalent with charging dock.	1	
33	Electric Tools	Dual Temperature Heat Gun	1800 W Dual Temperature Heat Gun	1	

34	Electric Tools	Soldering helping Hand	Specifications: Adjustable crocodile holding clamps/clip, Soldering iron holder, LED Light, Magnifying lens	4	
35	Electric Tools	Return Measuring tape	5M x19MM	2	
36	Measurement Tools	Stainless steel Rule	Stainless Steel 12"/150 mm Rule	5	
37	Measurement Tools	Digital Vernier Calliper	150mm/6" Digital VernierCaliper	2	
38	Measurement Tools	Spirit Leveler	12" Spirit Level	1	
39	Measurement Tools	Digital Pen Electric Tester	Voltage Tester	1	
40	Measurement Tools	Digital Multi meter	Digital Multimeter Voltage Current Resistance-7 Functions+19 Ranges to Cover, DC Voltage 200 mV to 1 kV, AC Voltage 200 V-750 V, DC Current 200 microA-10A, Resistance 200-2M Ohm and Transistor & Diode Test	5	
41	Biology Kit	DIY Paper Microscope	DIY Paper Microscope Magnification Range-100x to 2000x	5	
42	Astronomy Equipment	Telescope	All glass optical componets; Altazimuth mount suitable for terrestrial and astronomical use	1	
43	Textile	Sewing Kit	Semi-Automatic Sewing machine; straight stitch, Consumables-2 set of assorted needles and 10 colour spool set	1	
SI No.	Category	Name	Description	Qty	
01	Power supply and Accessories	Glue Sticks	11 mm x200 mm Hot Melt Glue Stick	100	
02	Power supply and Accessories	Nuts and Bolts and Screw	Specs-M4X12MM, M4X20MM, M5X16MM, M5X25MM, M6X20MM	40	
03	Power supply and Accessories	Cable Tie	Small Cable Tie Pack- Pack of 100	10	
			Medium Cable Tie Pack- Pack of 100	10	
			Big Cable Tie Pack- Pack of 100	10	
04	Power supply and Accessories	Sand Paper	Grit-80	10	
			Grit-100	10	

			Grit-120					
			Grit-200					
			Grit-300					
			Grit-80					
			Grit-80					
			Grit-80					
			Grit-80					
			Grit-80					
05	Power supply and Accessories	Power Strip Adapter	Standard Quality Extension with 5 AMP safety Fuse. 5 or more sockets in each extension. 5-meter length of each extension				10	
06	Power supply and Accessories	Bulb Holders	Regular Handing Bulb Holder				5	
07	Power supply and Accessories	Electric Wires	Twisted Red Black Pair per metre				10	
08	Power supply and Accessories	USB to DC Jack Cable	USB to DC Jack Cable for Battery Bank				20	
09	Safety Equipment	First Aid Kit	Standard First Aid Kit in portable container				10	
10	Safety Equipment	Fire Extinguisher (Handy Units)	Powder Type Fire Extinguisher-2 KG				2	
11	Safety Equipment	Safety Goggles	Polycarbonate Safety Goggles Clear Lens with No tint				30	
12	Safety Equipment	Safety Gloves Pairs	Latex Coating Gloves (Medium size)				10	
13	Safety Equipment	Safety Mask	Filtering Efficiency ranging 80% when tested against 0.3 micron sodium chloride particle				20	