

List of Items required on urgent basis (Updated on 15 May 2020)

(For contact details, please refer last page of the list)

SI No.	Item Name	Specification with make & model	Required Quantity
1	IR Thermometer sensor	Make: Melexis Model: RKI-3199 (i) Experimental board with sensor (ii) -40OC to +125 OC for sensor temperature -70OC to +380 OC for object temperature (iii) Available in 3 Volt version	03 Nos.
2	Geared DC Motor	150 W/ 24V DC/10 - 30 RPM	4 Nos.
3	Compatible driver	24 DC/ 20 A	6 Nos.
4	SMPS	Input: 220VAC, Output: 20A@24V, 4Channels	2 Nos.
5	Wheels	Diameter 8 Inch (200 mm)	8 Nos.
6	UV tube Lights	36W, 48 inch length, 1 inch dia.	8 Nos.
7	Nose foam strips for face mask	Common Size: 90*10*4MM, custom-made all sizes. Thickness: 4MM, 5MM, custom-made Color: Grey, Black, White Quantity/Paper: 100 PCS Paper Quantity/Carton: 201 Packing: Cartons Quantity/Carton: 20,000.00 PCS Carton Size: L520*W410*H530 mm	2000 Pcs (Approx)
8	UV-C Lampmeter	Make: Lutron Model: UVC-254	01 Pc.
9	UV-C Germicidal Tube	36 Watt	20 Nos.
10	1 inch pipe -6M		10
11	1 inch end cap		10
12	1 inch elbow		40
13	2 inch X 1 inch Reducer		10
14	1.5 inch X 1 inch Reducer		10
15	1 inch X 3/4 inch Reducer		20
16	1 inch x 1 ft Long short piece		10
17	1 inch x 1.5 ft Long short piece		10
18	1 inch x 4 inch Long short piece		60
19	¾ inch pipe - 6 m		10
20	¾ inch x 3 inch External threaded short piece		100
21	¾ inch - BSP threaded Nipple 150 mm long		30
22	¾ inch - BSP threaded Nipple 100 mm long		10
23	¾ inch - Ball valve 30 bar, SS		10
24	¾ inch - end cap		40
25	¾ inch X ¾ inch X ¾ inch Threaded Tee		20
26	½ inch BSP threaded Nipple 150 mm long		20
27	½ inch BSP threaded Nipple 100 mm long		30

28	½ inch - Ball valve 30 bar, SS		30
29	½ inch - 1 Ft Long short piece		20
30	½ inch - 6 inch Long short piece		20
31	½ inch - 3 inch Long short piece		20
32	½ inch Socket		120
33	½ inch Mist spray nozzle (Brass)		200
34	¾ inch U-clamp		100
35	1 inch U Clamp		100
36	B type single groove pulley- 5 inch		10
37	B type single groove pulley- 2 inch		10
38	B-56 Belt		10
39	Spray Pump GF-HTP-22 (or equivalent), Capacity:15-25 lpm, Pressure: 15-35 kg/cm2, Speed range 800 to 1400 rpm		10
40	1 inch Hose with steel end connector , 4.5 m long (60 bar)		10
41	¾ inch Hose with steel end connector , 1.5 m long (60 bar)		30
42	¾ inch Hose with steel end connector , 4.5 m long (60 bar)		10
43	½ inch Hose with steel end connector, 10 m long (40 bar)		20
44	½ inch reinforced flexible Hose with one end connector - 3 m long		10
45	50X50 X5 angle -06 m length		10
46	40X40 X3 angle -06 m length		10
47	25X25 X3 angle - 06 m length		10
48	Plate 6 FT X 4 FT x 5 mm thick:3 ft x 2ft		10
49	M12 x 50 bolt with nut and washer		40
50	M16 X 50 bolt with nut and washer		40
51	M8 X 30 bolt with nut and washer		40
52	Holdtite solution 500 gm		10
53	Jute 1 Kg		10
54	O-ring: 1", ¾" and ½"		300
55	18" Chopper Cutter		20
56	MS welding rod 2.5 mm -1 box		10
57	4" cutting wheel		100
58	Lub Oil -1 L		20
59	Teflon tape 1/2"		50
60	3/4" Union		60
61	Oxygen gas (2 Cylinders) and LPG (1 Cylinder) for cutting set, cylinders on rent		10
62	Air compressor (Rating: Direct 2 HP motor with tank storage capacity 24 – 35 Litre)		1 no.
63	Standard Wheel Chair		1 no.

64	SS pipe (Diameter: ¼ inch)		4.3 m long
65	SS pipe (Diameter: ½ inch)		0.95 m long
66	SS plate (1-1.2 mm thickness): Size 360 mm x 1125 mm		1
67	Copper capillary pipe (Diameter: 1/8 inch)		0.7 m long
68	Copper pipe (Diameter: 3/16 inch)		1.5 m long
69	Flexible Polypropylene RO pipe (pressure upto 8 bar) (Size: ¼ inch)		15 m long
70	Suitable T joint for ¼ inch diameter Polypropylene RO pipe		8 nos.
71	Suitable ON/OFF valve for ¼ inch diameter Polypropylene RO pipe		4 nos
72	Acrylic sheet (4 mm thickness): size 700 mm x 600 mm		2 nos.
73	Ball Joint (1/2 inch diameter arm)		3 nos.
74	Garden Sprayers Pump	12V battery operated pump Flow rate 3 -4 L/min Cutt off pressure - 5-7 bar	100
75	Battery	12V-50AH	100
76	Battery charger	12V	100
77	Sprayer Nozzle	Material - Fibre Glass lance Type of nozzle - Conical Double nozzles, Single nozzles	400
78	Spayer Hoses	Length -2 meters Material - PE	200 meters
79	Sprayer Switch Handle	Length - 8 inch Thread Outer Dia - 0.7 inch	100
80	For Sprayer poly boom wand	5pcs tee Single conical nozzle with bend adaptor	50
82	Electric Switches	On / OFF Switches	200
83	High power DC motor driver	24V/23A, Pololu-1456	5
84	Heavy duty Portable DC air compressor	12V/150psi, 65 LPM, air hose, nozzle power cord, Make Cyclone/Ucomp011	2
85	Advanced auto calibrating Line sensor	12V input, 8pair sensor array, 3 output modes(digital, UART, analog), 200Hz Make:Cytron LSA08	2
86	Ball transfer unit/caster	Flange or stud mounted/ SS ball diameter 1.5-2 inch>Loading 50-75kg	12 Nos.
87	DC geared motor	12V/35A/65 rpm Make: Bidorbuy, model 90ZY155-1265	4
88	In-wheel hub motor	180W/24V 12 inch wheel diameter (one side shaft mounting) with electromagnetic brake	4 Nos.

89	Wireless communication	2.4GHz trans-receiver/ 8-10 Channel Futaba: Tx-T10J Rx- R3008SB	1
90	Power pack	24V/29-30AH Li-Po battery back	2
91	220VAC / 50 Hz / 5 WATT Submersible Water Pump (Small Size)		1000
92	220VAC / 50 Hz / 7 WATT / 10 WATT Submersible Water Pump (Small Size)		1000
93	220VAC / 50 Hz / 10 WATT Submersible Water Pump		1000
94	12 V DC Submersible Water Pump (Small Size)		1000
95	5 V DC Submersible Water Pump (Small Size)		1000
96	12 V DC Submersible Water Pump (Small Size)		1000
97	12 Volts / 2 Amp 24W Mini Metal SMPS Power Supply Adaptor(Small Size)		1000
98	Arduino NANO ATmega328P		1000
99	2 Channel 5V Relay Module		1000
100	LM2596 DC to DC Buck Converter 3.0-40V - 1.5-35V (Step Down Module)		1000
101	5 V DC Operated Water Flow Control Solenoid Valve		1000
102	12 V DC Operated Water Flow Control Solenoid Valve		1000
103	DC Solenoid Electromagnet Valve (Water Flow Control)		1000
104	Male-Male, Male-Female, Female-Female Jumper Wires 120 Pieces (20 cm)		1000
105	Infrared (IR) Proximity Sensor (Adjustable Range: 3 – 80 Cm)		1000
106	Flexible transparent plastic pipes 1/4 " – 1 meter		1000
107	Flexible PVC non transparent plastic pipes 1/4 " – 1 meter		1000
108	Flexible PVC pipe 1/2 " – 1 meter		1000
109	LINE TRACKER MODULE BASED ON TCRT5000L		8 No.
110	JST 2 pin male female connector with pigtail		20 No.
111	Arduino Screw shields Assembled terminal		6 No.
112	Arduino Mega 2560 Rev3 board		2 no.

113	FlySky CT6B 2.4Ghz 6CH Transmitter with FS-R6B Receiver		1 No.
114	IR Proximity Sensor (E18-D80NK)		8 pcs
115	Step down LM2596 DC-DC adjustable voltage regulator (O/P-3A)		8 pcs
116	SSG-2, DC 12V, 0.02 - 0.8 Mpa, 12V Solenoid/Electrical Valve (1/2 inch)		12 pcs
117	Multi-copter optical Zoom camera for aerial surveillance	<ul style="list-style-type: none"> a. Power - 12V, 330mA b. Dimension - L144mm x W85mm x H134mm c. Weight - 540gm d. Image Quality - 14 megapixel e. Output Resolution - 1920*1080@60fps f. Recording Format - H.264 g. Optical Zoom - 18x h. Interface - HDMI, AV i. SD card - supports 32GB Micro-sd j. Control Range - -90°to +90°(Tilt), -150°to +150°(Pan), -85°to +85°(Roll) k. Working temperature: -10°C~50°C l. Control - PWM controlled movement m. Price - 1,07,800 	1
118	Long range HDMI video transmission link	<ul style="list-style-type: none"> a. Communication Distance- 5Km in air at max power (800mW) b. Video Resolution: 1080p (1920X1080 60/30fps) c. Output Power - 25mW to 800mW d. Sensitivity: -95dbm±2dbm e. Frequency - 5G f. Video Input - HDMI g. Video Output - HDMI, WI-FI h. Working Temperature: -10~60°C i. Working Voltage - 12V (2s-3s) j. Weight (air unit) - 86gm k. Weight (ground unit) - 198gm l. Price - 43,690 	
119	HDMI cable (male to male)	AmazonBasics High-Speed HDMI Cable (male to male and female to male, each approx. 5 meters)	2
120	Micro hdmi to micro hdmi cable(male to male)		3

Following items are required for 10 units (Mentioned quantities to be multiplied by 10)

PROCUREMENT LIST OF ASSISTIVE AGV DEVICE

Sl. No.	ITEM	SPECIFICATION	Country Origin/S ource	Total Qty
FOR ROBOT BODY				
01	Trolley 7 Drawers		India	1
MS Plate 0.5mm thk				
02	0.5 mm MS SHEET	8ftX4ft	India	1
MS Plate 1mm thk				
03	1mm MS SHEET	8ftX4ft	India	1
MS Plate 3mm thk				
04	3mm MS SHEET	8ftX4ft	India	1
Perspex sheet 2mm thk				
05	2mm Perspex SHEET	8ftX4ft	India	1
SQUARE BAR				
06	SERVO LINK	10x10x2500 mm, Fe410W, IS:2062	India	1
MS ROUND BAR				
07	MS ROUND BAR	φ 100x1000mm, Fe410W, IS:2062	India	1
Nuts, Bolts & Washers				
08	TAPING SCREW	M3x6.5L, IS:7170		50
09	HEX HEAD NUT	M10, IS:1363		40
10	SPRING WASHER	M10, IS:3063		40
11	PLAIN WASHER	M10, IS:2016		40
12	HEX HEAD BOLT	M10x45L, IS:1363		20
13	HEX HEAD BOLT	M10x20L, IS:1363		20
14	Allen Bolt -Socket head cap screw with washers and Nuts.	M3X5mm,M3X10mm,M3X15mm,M3X20mm,M3X25mm,M3X30mm M4X5mm,M4X10mm,M4X15mm,M4X20mm,M4X25mm,M4X30mm,M4X35mm M5X5mm,M5X10mm,M5X15mm,M5X20mm,M5X25mm,M5X30mm,M5X35mm		20 each nos
15	Microcontroller	Operating Voltage:5V Input Voltage:7-12V DC Current per I/O pin:40mA Clock speed:16MHz	India	1
		Operating Voltage:5V Input Voltage:7-12V Digital I/O pins:14 Clock speed:16MHz	India	3
16	Servo motor	Operating voltage:4.8-7.4V Speed(Second@60o):0.17-0.26 Maximum torque:32.5-50 Kg-Cm	India	1
17	Mega Torque Planetary DC Gear Motor	Power rating:250W I/O Voltage:18V Rated Current:14 A Speed: 50 RPM Torque: 352 Kg-Cm Gear ratio: 1:336	India	1
18	Camera	Power Supply: DC 5-36V Battery Type: Dimension:28.5x26x26 Horizontal resolution:600TVL Lens:2.5 mm(Default)	India	2
19	Transmitter with receiver	Transmitter Volt:7.4-16V,32Channel Working current:220mA at 12V Video band width:8Mhz Audio band width:6.5Mhz Dimension:55x35x10mm Receiver Volt:12V,32 Channel Working current: 200mA (Max.) Antena impedance:50 Omega Video format: NTSC/PAL auto Dimension:80x65x15mm	India	2
20	Lead Acid Battery	Volt:12V Current:7 Ah	India	2
21	Fuse	Current rating:10A Type: Glass Fuse	India	2
23	Charging port	Current rating:10A	India	2
24	ON/OFF press switch	Current rating:20A	India	3
25	Infra Red sensor module (Obstacle)	Detecting distance:20-150 cm Supply voltage:4.5 to 5.5V Consumption current:33mA	India	2
26	IR proximity sensor(Path follower sensor)	Power supply:5V	India	2

		Working range:10-20 mm Operating current<10mA		
27	Rack & Pinion	Rack Length:15 Inch No. of teeth:82 teeth	India	7
		Pinion Outer dia:39 mm No. of teeth:25 teeth		7
28	BO(Battery Operated) motor Metal gear	Type: I shaped single shaft Voltage Supply:6-12 V No load current:40-180mA Torque:0.35 Kg-Cm Speed: 300RPM Shaft length:8.2 mm	India	7
29	Central Drawer controller with receiver system board.	Operating voltage: DC 5-9 V,4 Channel Frequency:433 MHz	India	1
30	UV light	Wave length:950 nm Operating voltage: Ac 230 V Input current:40 mA Power:20W	India	7
31	Wireless transceiver module with external antenna	2.4 GHz ISM band Max. air data rate:2 Mb/s Supply voltage:1.9-3.6 V Max. Operating current: 13.5 mA	India	1
32	Relay module	Ac 250 V/10A,Dc 30V/10A Working voltage:5V Size:50x26x18.5mm	India	2
33	Limit switch	Size:28x9x16mm Current:15A	India	2
34	Channel relay module	4 channel relay interface board Size:75x55x19.3 mm Max. output: Dc 30V/10A, Ac250V/10A Input voltage:5V Each channel needs:15-20 mA driver current	India	1
35	Motor driver	Current capacity:14A Peak current capacity:30A Max. voltage:16V Max. PWM frequency:30 KHz	India	4
36	Dc to Dc Voltage step down buck converter	Input voltage:5- 32 V Dc Output voltage:0.8 -30 V Dc Output current: 5 A (Max.) Switching frequency:300KHz Dimension:51x26x14 mm	India	4
37	Lipo battery	3000 mAh Nominal voltage:22.2V Dimension:130x44x38mm	India	1
38	Lipo battery	3300 mAh Nominal voltage:22.2V Dimension:130x44x38mm	India	1
39	Digital color TFT LCD	2 wide input,1 way audio input 1 HDMI & UGA input Size:9 Inch	India	1
40	Voltage regulator IC	Output voltage: +5V	India	5
		Output voltage: +5V		5
41	Buck Converter	Output: 5V Input: 24 V	India	5
42	Rubberized waterproof Tape	4 Inch x 5 Feet, Black	India	30
43	Both side tape	1"	India	4
44	Battery(Rechargeable)	AA,9V AAA,9V	India	6
45	Blinking top lamp (hooter)	High Intensity LED 10W Power and DC10-80V Dimensions: 4.1"(Height) x5.3"	India	1
46	Battery Level Indicator	voltage range : DC6 -63V LCD screen display	India	1
47	Multi-Purpose Spray Paint	f22 F1Aerosol Multi-Purpose 131,Suzuki Red	India	1 Lt.
		f22 F1Aerosol Multi-Purpose 131,Suzuki Orange		1 Lt.
48	Wire	24 AWG teflon coated wire, 5 colour	India	As. Per req.

49	Heat sink	large, small, medium, 2 colour	India	As. Per req.
50	RMC male female connector	3pin , 5 pin, 2pin	India	As. Per req.
51	JST Plug connector	2pin	India	As. Per req.
52	DC Barred Jack Plug	male type	India	As. Per req.
53	PCB Board		India	As. Per req.
54	3 cell battrey Charger		India	As. Per req.
55	DC- DC converter	8A, 200W	India	As. Per req.
56	MALE FEMALE JST PLUG	2pin	India	As. Per req.
57	M to M, F to F, M to F	2.5 mm jumper wire	India	As. Per req.
58	Ribbon Cable	10 Wire, flat	India	As. Per req.
59	M to F, F to F	3pin/Port dupont cable	India	As. Per req.
60	AV CABLE	RAC Female AV cable	India	2
61	Soldering iron with Stand		India	As. Per req.
62	Soldering wire		India	As. Per req.
63	Wire	Teflon coated High(20A)	India	As. Per req.
64	Berg strip	male female type	India	As. Per req.
65	Switch	round cat eyw Red LED power switch, 20mm opeaning rocker switch	India	As. Per req.
66	DC Switch	Toggle type High Ampere	India	As. Per req.
67	LED	RED, GREEN, BLUE, YELLOW	India	As. Per req.
68	Teflon stud and nut	1inch, 2 inch, 1/2 inch, 1x1/2 inch	India	As. Per req.
69	BlackTape	RED, GREEN, BLUE, YELLOW, BLACK	India	As. Per req.
70	Cable tie	1/2 ft, 1feet	India	As. Per req.
71	Elcetronic components, IC, RESITOR, CAPACITOR,TRANSISTOR	As. Per req.	India	As. Per req.
72	Glug gun and stick		India	As. Per req.

Essential items

FOR CONTROL UNIT

01	PLASTIC FRAME	As per drwaing MCD-00.00.08.00	India	1
02	Camera	Power Supply: DC 5-36V Battery Type: Dimension:28.5x26x26 Horizontal resolution:600TVL Lens:2.5 mm(Default)	India	1
03	Transmitter with receiver	Transmitter Volt:7.4-16V,32Channel Working current:220mA at 12V Video band width:8Mhz Audio band width:6.5Mhz Dimension:55x35x10mm Receiver Volt:12V,32 Channel Working current: 200mA (Max.) Antena impedance:50 Omega Video format: NTSC/PAL auto Dimension:80x65x15mm	India	1
04	Lipo battery	3300 mAh Nominal voltage:22.2V Dimension:130x44x38mm	India	1
05	Dc to Dc Voltage step down buck converter	Input voltage:5- 32 V Dc Output voltage:0.8 -30 V Dc Output current: 5 A (Max.) Switching frequency:300KHz Dimension:51x26x14 mm	India	1
06	Digital color TFT LCD	2 vide input,1 way audio input 1 HDMI & UGA input Size:9 Inch	India	1
07	Central drawer controller with transmitter system board	Operating voltage: DC 5-9 V,4 Channel Frequency:433 MHz	India	1
08	Transmitter Remote (Joystick)	2.4GHz,6 Channel Input voltage:	India	1
09	Touch sensing sensor module	Operating voltage:2-5.5V Startup calibration delay:0.5 Sec Size:9 Inch	India	2
10	ON OFF Switch	Operating voltage: DC 5-9 V,4 Channel Frequency:433 MHz	India	1
11	LED	3V, 5mm	India	1
12	Wire	24 AWG teflon coated wire, 5 colour	India	As. Per req.
13	Elcetronic components, IC, RESITOR, CAPACITOR,TRANSISTOR	As. Per req.	India	As. Per req.

Expression of Interest for Supply of Items

If you are interested to supply any/all items please email at:

pur@cmeri.res.in / b_dhar@cmeri.res.in

or

Contact: +91-9874206732