

**[CSIR-AMPRI]  
PROCUREMENT PLAN\***

(\*Please read the note given at the end)

<b>A</b>	<b>FOR THE FINANCIAL YEAR 2024-25</b>
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<b>A (a)</b>	<b>EQUIPMENT</b>
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<b>(i)</b>	<b>Equipment: Out of CSIR Infra Grant</b>
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Sr. No.	Name Category of Equipment/ Vehicle Item	Quantity (Nos.)
1	Electron microscope with EBSD and EDS	1
2	Electrochemical work station	1
3	Battery tester	1
4	ACs	20
5	FTIR	1
6	Vacuum sealing machine	1
7	Regeneration unit for glove box	1
8	Vacuum mixer	1
9	Die cutter machine	1
10	Coin cell punching machine	1
11	High temperature universal tribometer	1
12	Nano indenter	1
13	Roll press machine	1
14	High temperature high velocity spray coater	1
15	3D printer	1
16	Ultrahigh vacuum chamber with turbo pump and gauges	1
17	Vacuum furnace	1
18	Hot press	1
19	Gas Chromatography	1
20	Photosimulator	1
21	TGA/DTA	1
22	Tubeler Vacuum Furnace	1
23	Extruder Machine	1
24	Desktop Computer/laptop	15
25	Bending Tester	1
26	Viscometer system	1
27	UV- Vis	1
28	3 D Printer	1
29	Uniform Cooling arrangement for Foam making mold with liquid foam.	1
30	Fabrication of structure for stirrer motor positioning during foam making.	1
31	Hydrogen storage material analyzer	1
32	Ball mill system	1
33	High-temperature vacuum tubular furnace ( $\geq 1700^{\circ}\text{C}$ )	1
34	Ultrapure water filtration unit (DI)	1
35	Homogenizer	1
36	Vacuum Oven	1
37	Environmental chamber	1
38	Mixer	1
39	Rack Mountable Server with Rack	1
40	24 Port Gigabit Switch	2
41	2KV UPS	2
42	Large-scale Extruder & Injection Molding Machine	1
43	Granulator Mixing Machine/ Pulverizer	1
44	Fiber chopping/Cutting Machine	1
45	Milling Machine	1
46	Curing Machine	1
47	Vacuum Oven / Dry Air Oven	1
48	Flat panel X-ray detector	1
49	Inductively coupled plasma-optical emission spectroscopy (ICP-OES) along with microwave digester	1
50	Hot air oven	2

51	Melt Casting furnace (1400°C)	1
52	Electrochemical workstation (with impedance measurement, bi-potentiostat, RDE, RRDE, and Scanning Electrochemical Microscope)	1
53	Battery fabrication and testing equipment (Multi-channel Battery tester, Glove box , Crimping machine for coin cell and components, roll pressor)	1
54	Flammable and Explosion Proof Refrigerator/ Laboratory Refrigerator/ Spark-free Refrigerator.	1
55	Workstation/ Mobile Workstation for installation of Design Software: 32-64 GB RAM, 4-8 GB Graphics Card, I7 Processor and at least 500 GB SSD.	1
56	UV-vis spectrophotometer	1
57	Electrochemical work station	1
58	Lab Ultra filtration Test Skid	1
59	High Pressure Stirred Cell with Accessories	1
60	Contact Angle Measurement	1
61	Tech Mem Pro – Flat-sheet Casting 1 Machine with Heating Facility	1
62	Tensile Strength Tester (Micro UTM for membrane sample testing only)	1
63	Analytical and precision weighing balance	1
64	Hot Air Oven	1
65	UV-VIS Spectrophotometer	1
66	Total organic carbon (TOC) analyzer	1
67	Hotplate stirrers	1
68	Millipore Type I Lab Ultrapure Water Purification System	1
69	Laminar Air Flow unit	1
70	Uniform Cooling arrangement for Foam making mold with liquid foam.	1
71	Fabrication of structure for stirrer motor positioning during foam making.	1
72	-80 degree Deep Freezer	1
73	Microwave Synthesizer	1
74	Microwave digester	1
75	3D printer (liquid resin based)	1
76	Fume hood	1
77	Inverter with battery	1
78	Water Purifier (RO)	1
79	Thermal Camera	1
80	Heavy duty drone	1
81	Analytical Micro Balances (up to 5 decimal places)	1
82	Multichannel Potentiostat & galvanostat workstation with EQCM Module and SERS laser accessories	1
83	Photoluminescence Spectrometer	1
84	NanoDrop, UV-Vis Spectrophotometer	1
85	Integrated Vacuum Concentrator Systems	1
86	Water Purification System	1
87	Dynamic Image / Particle Size Analyzer	1
88	Laboratory Refrigerator (multi-door) (2-20°C)	1
89	Humidity Chamber	1
90	Hot Air Oven (20-250 deg C.)	1
91	Laminar Flow/Biosafety cabinet	1
92	Shaker	1
93	Micro Pipettes (whole set from 0.1 microns to 5 mL range)	1
94	Muffle Furnace	1
95	BET surface analyzer	1
96	UTM/CTM	1
97	Hydrothermal autoclave	1
98	Accelerated carbonation center	1
99	Accelerated weatherometer	1
100	Benchtop XRF	1
101	ICPMS with microwave digestion system	1
102	Concrete mixer pan type	1
103	RCPT	1
104	Fork lifting machine	1
105	Concrete permeability tool	1

106	Muffle furnace	1
107	Industrial oven	1
108	Core cutter	1
109	PCs with printer	20
110	3D printer (tentative make model - ULTIMAKER S7/S5)	1
111	PCB Prototyping Machine and SMT/SMD pick, place, mounting and fixing including accessories	1
112	Programable/PC controlled DC power supply	2
113	Multi-GPU server with 32-inch display	1
114	GPU-enabled high-end workstation with 32-inch display	4
115	Network attached data storage system (NAS)	1
116	Hand-held 3D scanner for physical component to PC model	1
117	Hyperspectral camera	1
118	GPU-enabled high-end embedded board	1
119	Photocopier machine -A3	1
120	Xerox Machine (RICOH AFICIO MP 2000Le)	1
121	Dell Inspiron Computer System (60.5cm display size)	2
122	Kibo XS Device	1
123	Bench Top Energy Dispersive X-ray Fluorescence Spectrometer (ED-XRF)	1
124	Gas chromatography–mass spectrometry GC-MS	1
125	Inductively coupled plasma mass spectrometry ICP-OES	1
126	Automatic Portable Concrete Batching Plant & Mixing Plant with PAN Mixer and belt Conveyor	1
127	GC-MS (Gas Chromatography Mass Spectrometry)	1
128	Oxygen Sensor	1
129	Analytical weighing balance	1
130	CENTRIFUGE machine	3
131	Hot air oven	2
132	Muffle furnace	1
133	Tube Furnace	2
134	fumehood	3
135	Bath sonicator	1
136	Empty Gas Cylinders	15
137	Hot plates	10
138	Gas regulators	10
139	Rotary pump	2
140	glovebox	1
141	DI wate runit	1
142	Electrochemical workstation	1
143	TDS /Conductivity Meter	1
144	Turbidity Meter	1
145	ZHE apparatus for TCLP	1
146	High Temperature Muffle Furnace	1
147	Hot Air Oven	1
148	1.5 Ton Split AC	1
149	Fluidic Force Microscopy Electrochemical 3D printer	1
150	FT-IR	1
151	UV-Vis's spectrometer	1
152	Zeta Potential Analyzer	1
153	stylus profilometer	1
154	3D concrete printer	1
155	Water permeability Apparatus for concrete	1
156	Carbonation Chamber	1
157	Concrete Pan Mixer	1
158	Concrete Moisture Meter	1
159	Ultrasonic pulse velocity	1
160	Rebar locator	1
161	RCPT	1
162	Photocatalytic reactor	1
163	Fatigue Rated Servo-Hydraulic UTM Machine of 100kN Capacity with Low and High Temperature Testing Capability	1
164	Thermal evaporator	1
165	Muffle furnace	1
166	Digital multimeter	1

167	Digital PH meter	1
168	C-V set up	1
169	ALD	1
170	ultrasonicators	6
171	Power supply	5
172	Water purification unit	1
173	High-end Server with virtualization for data centre	2
174	Intelligent/Smart Rack for Data Centre	2
175	Core Network Switch, Layer 3, 24 Ports 10G Base-X L3 Managed Switch, with 24x10G SFP+, 2x100G	2
176	24 Ports L2 Managed POE++ Switch, with 24x100/1000M/2.5GBase-T, and 6x10G SFP+ Uplink Ports	50
177	Wi-Fi6 Enterprise Access Points	55
178	SFP+ Transiver 10G Single Mode Dual Fiber	90
179	AC Split (2ton)	4
180	AC Cassette (3 ton)	5
181	Projector	1
182	HDMI Splitter/Switcher with 8	2
183	HDMI Splitter/Switcher with 4	4
184	IP based (Digital/Hybrid) PBX System (250-300 nodes) (Digital-Analog : hybrid) - to be integrated with Direct Telephone and Ship Trunk	1
185	IP (Digital) Instrument for intercom Service	150
186	<b>PA System for Coneference Hall with installation and Commissioning:</b> Chairman Mic : 01 Table Top Mic - Delegate Unit: 26 Dual Mic for Podium: 01 Color abd Hand Mic:01 Central Control Unit: 01 extension conference cable for the above audio conference system - Complete Set : : 01 Mixer Amplifier : 01 Ceiling loudspeaker: 12 2 channel class D Networkable Power: 01 amplifier: 01 Podium with Screen: 01 Touch Controller: 01	1 Set
187	<b>PA System for Meeting Halls with installation and Commissioning:</b> Table Top Mic - Delegate Unit: 15 Dual Mic for Podium: 01 Chairman Mic: 01 Central Control Unit: 01 10 mtr extension conference cable for the above audio conference system: 1 Set Mixer Amplifier: 01 Ceiling loudspeaker:01	2 Set
188	VC Facility (IP based as well as Virtual Platforms) With Speaker Tracking (Codec basde) fro Conference Hall	1 Set
189	VC Camera additional for Conference Hall	1
190	VC/Online Meeting facility (dual Camera with Microphone, Speaker)	04
191	98 Inches Commercial Display 4K with display mounting kiy	8
192	65 Inches Commercial Display 4K with Popup display for chairman	4
193	Desktop Computer (i7 ; 32GB RAM ; 1TB SSD; win 11 OS; 24" Monitor, MS office) for Conference and Meeting Halls	3
194	Laptop (i7 ; 32GB RAM ; 1TB SSD; win 11 OS; 14" Screen; MS Office; HDMI ; LAN Port) - Heavy Duty for Conference and Meeting Halls	3
195	Video Switcher HDMI (8X8) for Conference Hall	1
196	Content Switcher HDMI (16x16) ) for Conference hall	1
197	Visuliser	2
198	Stream Recorder	1
199	Switcher for Camera (USB/HDMI) for Meeting Halls	2
200	Content Switcher HDMI 8x8 for Meeting Halls	2
201	Desktop Computer for Digital Library	20
202	Portable PA System (indoor & Out Door) with two Stand mount speaker of 22000Hz	1
203	Wired and Wireless mic for PA systems	6
204	110 Inches Commercial Display 4K	1
205	Hot Compression Molding Press /Hydraulic press	1
206	3D Printer	1
207	VNA (Vector Network Analyser)	1

208	Automatic Bamboo Splitter Machine	1
209	Vacuum Impregnated Bamboo Treatment Plant	1
210	Automatic Bamboo Board Cutting & Cutting Machine Table Saw (with carbide teeth)	1
211	Belt Sander Machine etc.	1
212	CHNS/O Elemental Analyser	1
213	Electrical conductivity sensing machine	1
214	Lab Ultra filtration Test Skid	1
215	PCR (polymerase chain reaction) Thermalcycler	1
216	Gel doc Imaging System	1
217	Gel Electrophoresis System	1
218	Qubit Fluorometric Quantification	1
219	Flow cytometry	1
220	Fluorescence Microscope	1
221	Fluorescence Spectroscope	1
222	Milliq water system	1
223	Nuclear Magnetic Resonance (NMR) spectroscopy Machine	1
224	Bamboo Textile related equipment's like Handloom machine	1
225	Fabric Air permeability tester	1
226	Fabric Bursting strength test machine	1
227	Lea strength machine	1
228	Thermal Resistance machine	1
229	Zipper strength tester	1
230	Tensile strength machine	1
231	Bamboo Charcoal/Biochar Making set up/ Machinery	1
232	Fume hood, heat bath, ice maker	1
233	Polishing units	1
234	Positive pressure unit	1
235	Rota evaporator	1
236	HEPA Filter	1
237	Video conferencing system, computers/ laptops/ mobile workstation/ printers/coloured printers/furniture for equipment's/ other research/support equipment's, etc.	1
238	Knot removal Machine	1
239	3D scanner	1
240	Extruder	1
241	Data Recurring Machine	1
242	Projector	1
243	Hotplate stirrers	1
244	Ultra-sonicator	1
245	Cooling machine	1
246	Optical microscopes with lasers sources	1
247	DMA (Dynamic Mechanical Analyser)	1
248	Teflon Lined Autoclave	1
249	Thermal conductivity sensor for film	1
250	Probes	1
251	Spare part of the equipment's	1
252	Accessories of equipment's	1
253	Air Conditioner	1
254	Analytical and precision weighing balance	1
255	Analytical Micro Balances	2
256	Multichannel Potentiostat & Galvanostat workstation with EQCM Module and SERS laser accessories	1
257	Photoluminescence Spectrometer	1
258	Integrated Vacuum Concentrator	1
259	Water Purification System	1
260	Dynamic Image / Particle Size Analyzer	1
261	Laboratory Refrigerator (2-20°C)	1
262	Humidity Chamber	1
263	Hot Air Oven (20-250 deg C.)	1
264	Laminar Flow/Biosafety cabinet	1
265	Shaker	1
266	Micro Pipettes	1
267	Mobile based COVID-19 electrochemical sensor	1
268	ELIX essential 3 KIT (Type-II water @ 3 litre/h	1
269	Peristaltic Pump tubing for AAS	1
270	Molybdenum Hollow cathode lamp for AAS	1
271	Hot air gun, industrial IR thermometer, acetylene gas cylinder and ancillary items	1
272	Porosity detector for coating	1

273	Salt spray chamber	1
274	UV meter	1
275	Adhesion strength tester	1
276	Atomizer	1
277	Impedance tube with related accessories	1
278	Building acoustic system with related accessories	1
279	Handheld analyzer	1
280	Absorption measurement system	1
281	Software (Insul, etc.)	1
282	BAMS (Biometric Attendance Machines)	5
283	ICDD software (PDF-4 AXIOM)	1
284	3D SpectAlyze Standard	1
285	Photomultiplier	1
286	Xenon Lamp	1
287	Solid Sample Vial	1
288	Photocopy Machine A3/A4	4

**(ii) Equipment: Out of CSIR Funded Projects**

Sr. No	Name Category of Equipment/ Vehicle Item	Quantity (Nos.)	Project Number/ Code
1	Rotavapor with pump and chiller	1	MLP301
2	Filament extruder	1	MLP301
3	Fdm printer	1	MLP301
4	Direct ink printer	1	MLP301
5	fumehoods	1	MLP301
6	Weighing balance	1	MLP301
7	Ph meter	1	MLP301
8	Ultrasonicators	1	MLP301
9	Magnetic stirrer	1	MLP301
10	Vacuum oven	1	MLP301
11	Hot air oven	1	MLP301
12	Distilled water plant	1	MLP301
13	dessicators	1	MLP301
14	Deep freezer	1	MLP301
15	Ice maker	1	MLP301
16	Laboratory Dishwasher	1	MLP301
17	Gas cylinders	-	MLP301
18	Vacuum sintering furnace	1	FTT-060501
19	Data logger	1	FTT-060501
20	Dc power supply	1	FTT-060501
21	Ride on Roller Compactor	1	HCP-54 (WP-2)
22	Hot press	1	NCP040301
23	Homogenizer	1	NCP040301
24	Vacuum Oven	1	NCP040301
25	Environmental chamber	1	NCP040301
26	Mixer	1	NCP040301
27	3D printer	1	NCP040301
28	MultiJet and ThermalJet Extrusion based 3D Bioprinter	1	MLP 301
29	Semi-pilot demonstration unit	1	HCP 54-WP 1
30	Concrete mixture Pan type	1	
31	Aggregate impact tester	1	
32	Computational facilities desktop, printer, laptop, power backup	1	
33	Display unit	1	
34	Crushing value apparatus	1	
35	Optical microscope	1	
36	Lateral extensometer digital	1	
37	Longitudinal compressometer digital	1	
38	Cooling facility air conditioner/ cooler	2	
39	Concrete permeability apparatus	1	
40	RCPT machine with computer attached machine and software	1	
41	Refrigerator	1	
42	Consistometer	1	
43	Small sized ball mill	1	
44	Humidity chamber	1	

45	Drop tester	1	
46	Carbonation chamber	1	
47	Conductivity meter	1	
48	Compressive strength machine	1	
49	Creep test ring	1	
50	Vibration table	1	
51	Flexural testing machine	1	
52	Jaw crusher	1	
53	Furnance	1	
54	Deionized water maker	1	
55	Oven	1	
56	UV Printing Machine	1	FTC040508
57	Edge Binding	1	FTC040508
58	Mixing Machine, strip packing Machine	1	FTC040508
59	Computer	1	FTC040508
60	Laptops	1	FTC040508
61	Tablet/notebook	1	FTC040508
62	Xerox Machine	1	FTC040508
63	UPS	1	FTC040508
64	LCD projector	1	FTC040508
65	Spin Coating Machine	1	HCP0101
66	BOD Incubator	1	HCP0101
67	Photomultiplier (Photoluminescence Spectrometer Accessory	1	HCP0101
68	Spectral Correction Array kit (Photoluminescence Spectrometer Accessory)	1	HCP0101
69	Lyophilizers	1	HCP0101

**(iii) Equipment: Out of Externally Funded Projects (EFP)**

Sr. No	Name Category of Equipment/ Vehicle Item	Quantity (Nos.)	Project Number/ Code
1	HPLC/UPLC	1	GAP (DBT funded)
2	High-speed temperature-controlled centrifuge machine	1	GAP 40
3	Desktop/Laptop	1	(Proposed in a project submitted to ISRO)
4	High-power sonicator	1	(Proposed in a project submitted to ISRO)
5	RTP-CVD	1	DST
6	FTIR	1	GAP
7	Ultrahigh vacuum chamber with turbo pump and gauges	1	GAP
8	Multi PalmSen4	1	GAP
9	Liquid Nitrogen Storage Container with Racks	1	GAP
10	Circulating Water Bath	1	GAP
11	Weighing Balance	1	GAP
12	Orbital Shaker	1	GAP
13	Biological Safety Hood	1	GAP
14	CO <sub>2</sub> Incubator	1	GAP
15	Microplate Reader	1	GAP
16	Water Bath	1	GAP
17	Workstation/ Mobile workstation		GAP130
18	EMM machine spares (like capacitors, cable, spark gap, Voltage supply for 40 KJ electromagnetic forming machine, etc , any others spares of the machine., software/computer/computers peripherals /instruments etc.)	1	GAP130
19	Laptop Computer	1	SSP-69/70
20	Colour Laser Printer	1	SSP-69/70
21	Computer/Laptop	1	
22	Printers	3	
23	Monitor	1	
24	Work Station	1	
25	Sound level meter	1	
26	Power Amplifier	1	
27	Weather sensor with data logger	1	
28	UPS	1	
29	Color and Black & White Printer	2	

30	Digital Storage Oscilloscope	1	
31	Function Generator	1	
32	Hammer Drill Machine/Drill Machine	1	
33	Computer Table/Chair	1	
34	Impedance tube (Transmission Loss, sound absorption, and reflection coefficient measurement) and laptop, software, microphone, calibrator, other accessories etc	1	
35	Building acoustics system with laptop, software, microphone, calibrator, other accessories etc	1	
36	Handheld analyser (Class-I) for precise measurement & accessories	1	
37	Absorption Measurement System for Road Surfaces with accessories	1	
38	Software (Insul, etc.)	1	
39	Textile Calendaring Machine -		
40	Digital Refractometer- Optical meter-		
41	Connect Texture Analyser-		
42	UV-VIS Spectrophotometer -		
43	3D printer for additive manufacturing with accessories etc. -		
44	NanoDrop, UV-Vis Spectrophotometer	1	DBT Approved Project

<b>A (b)</b>	<b>CONSUMABLES</b>
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Sr. No.	Category
1.	<p>R&amp;D Consumables for closed loop systems (by equipment name eg. Kits for Illumina sequencer)</p> <p>Thermocouples for data logger, Molds for Paver Blocks, Curve Stone, Beam, Standard Concrete Cube Mold, Mortar Cube Mold, Silicon Molds, Slab Molds, Molds for Precast Concrete Components, Slump Cone Mold, Graphite Crucible, Alumina Crucibles, Dies, High Temperature Tongue, TEM Grid, IR Thermo Meter, Tool kit Set, screen printed electrodes for electrochemical work station, etc.</p>
2.	<p>Chemicals/Consumables</p> <p>MAX Phases, metal hydrides, DMF, DMSO, TMAOH, TBOAH, PVDF-HFP, Acetone extrapure, Dimethylformamide (DMF) extrapure, Isopropanol (IPA) extrapure, Methanol extrapure, Potassium Permanganate, Benzyl Alcohol, Palladium Chloride, Polyacrylic acid powder, Polystyrene, Palladium acetate, Nickel powder, n-Hexane extrapure, Hydrazine Hydrate, graphite flakes, Pallidium acetate, Polyamide resin, CNTs, PVA, etc.</p> <p>Sodium Hydroxide, Sodium Metasilicate, Potassium Hydroxide, Potassium hydroxide, silica gel, Potassium Silicate, Silica Fume, Magnesium sulfate, Sprit, Ethyl alcohol, Acetone, Boron nitrate, Graphite, Graphene, Charcoal, Carbon Black, Calcium Oxide, Epoxy polymer, sucrose, etc</p> <p>Hard graphite dies with various dimensions and coatings, Alloy 230 die and bottom plate, Hard chromed steel die with various dimensions, Alumina and zirconia die, Increasing the daylight height of 40 Ton hydraulic press, Shifting of X-ray attenuation testing facility to new premises, Laboratory chairs, Joint free hard graphite die coated with tungsten, X-ray shielding tiles, X-ray tube, Hard graphite and alumina ram</p> <p>Palladium Chloride, Malachite green (C<sub>23</sub>H<sub>25</sub>ClN<sub>2</sub>), Crystal violet (C<sub>25</sub>H<sub>30</sub>ClN<sub>3</sub>), zinc acetate dihydrate, Copper (II) nitrate trihydrate, Palladium (II) nitrate, Potassium gold (II) chloride, Lithium perchlorate, Lithium hexafluorophosphate, Polypropylene carbonate, Ethylene carbonate, Dimethyl carbonate, Diethyl carbonate, Fluoroethylene carbonate, Tris-sodium citrate, KNO<sub>3</sub>, Titanium isopropoxide, Polyacrylic acid powder, Polystyrene, Palladium acetate, Transition metal carbides, Metal hydrides, LiF, Hydrofluoric Acid (40%) AR, Hydrogen Peroxide solution, PVA, Sulphuric Acid, Hydrochloric Acid, Ammonium Para Tungstate, N-Methyl-2-Pyrrolidone (NMP), Thioglycerol, methyl phenyl sulphone, etc.</p> <p>Working electrodes like Glassy carbon, Ni foam, Cu foam, ITO, MMO, etc. Reagent and solvents, Binders, batteries, Gas atomized &amp; Plasma atomized metal powders of AlSi10Mg, SS316L, Tungsten, Copper, Inconel 718/625 (for EPBF, PSD: 45 to 106; for LPBF, PSD: 15 to 53/10 to 45), Nano dispersoids (Y<sub>2</sub>O<sub>3</sub>, La<sub>2</sub>O<sub>3</sub>, and TiB<sub>2</sub>), Heavy metal oxides, chemicals (IPA, Acetone, Ethanol, Methanol etc.), Metallography Consumables (emery papers, Alumina powder, Alumina suspension, colloidal silica suspension, diamond paste, cloth for fine polishing etc.), UV-IR Protection glasses, TEM Grids (200 mesh, 300 mesh &amp; 400</p>



mesh), H<sub>2</sub>+N<sub>2</sub>+Ar gas purging facility for high-temperature annealing furnace, Memory Storage devices (SD Card, Pen drive, HDD, SSD), Ethylene Glycol, Emplura Water, double distilled Water, De-ionized Water, Glycerine and metallography consumables for smooth execution of the project.

AMC for TEM Sample Preparation Equipments (Ion Beam Milling System, Dimple Grinder, Ultrasonic Disc Cutter, Minitom Low-Speed Diamond Saw). Liquid Nitrogen, Sulfuric acid LR, Nitric acid LR, Hydrochloric acid LR, Perchloric Acid, HPLC and Analytical Grades

Chemicals, Biochemicals, Media/Broth, Bacterial strains, Cell lines, Bacterial Assay Kits, Cell culture Assay Kits, Biomarkers, Antigens and Antibodies, TEM Grids, Screen Printed Electrodes, Glassy Carbon Electrodes, electrochemical glass cell, Ag/AgCl counter electrode, platinum grid reference electrode, platinum wire reference electrode

Chemicals (ex.- Name the different chemicals like Solvents, Biochemical/s, Biochemical kits & enzymes, Diagnostic kits, Sequencing, Oligonucleotides, etc.)

Paraffin wax, Liquid paraffin, Metal powders like Ni, Mn, etc.PCM material, Nano metal powders, consumables for metallography, DSC sample holder, epoxy hardener

Chemicals(ex. Name the different chemicals like Solvents, Biochemical/s, Biochemical kits& enzymes, Diagnostickits, Sequencing, Oligonucleotides, etc.)

Solvents like Acetonitrile, DMF, acetone, ethanol, methanol, propylene carbonate etc.

Alkali like NaOH, KOH etc, Acids like H<sub>2</sub>SO<sub>4</sub> HCl etc, carbonate and bicarbonate salts, different transition metal ions salt, rare earth ions salts, electrodes like GC, ITO, Ag/AgCl, Ag/AgNO<sub>3</sub>, Hg/HgO etc, Ni foam, membranes, etc.

NaCl, NaOH, Acetic Acid, Acetone, Ethanol, Phenol, Benzene, Toluene, Chloroform, HCl, H<sub>2</sub>SO<sub>4</sub>, HNO<sub>3</sub>, H<sub>2</sub>O<sub>2</sub>, Citric Acid, Bismuth Nitrate, Gadolinium Nitrate, Cerium Nitrate, Cytosine, Uracil, SLS/SDS, SHMP, PDMS (Sylgard), Poly Caprolactone, Polystyrene, Sodium Alginate, MXene, HF, Lignin, Bamboo powder, Isoamyl alcohol, Beta mercapto ethanol, PVP, RNase, Glycerine, Glycerol, Gelatin, Vinegar, Yeast, Starch, Cellulose, Chitosan, Graphene Oxide Nanoparticles, Silver Nanoparticles, Zinc oxide Nanoparticles, Poly(ethylene glycol) (PEG);Poly (vinylidene fluoride); PANI; Polypyrrole; PEDOT; polythiophene; Polyacetylene; Polyfuran; Polyetherimide; Polyacrylonitrile; Polylactic acid;Polyvinyl alcohol;Polyvinyl Acetate; Cellulose Acetate, Cellulose, hemicellulose, Polydopamine, Organic and Inorganic Dyes and Stains like Methyl Red, Methylene Blue, Rhodamine B, etc., Taq polymerase, DNTP, TAE Powder, C TAB Buffer and other buffer solutions, Phenol Chloroform, Isopropanol, UV curable resin; Conductive resin; FDM filament; sodium Alginate; PGA (Poly-Glycolic Acid); PLGA (Poly-lactic-co-Glycolic Acid); Acetonitrile etc. Bamboo Composite, Various Textiles like bamboo, cotton, Bismuth oxide, rubber etc., Labolene, Hydrochloric Acid, Aluminum nitrate nonahydrate, Sodium Carbonate Anhydrous, other laboratory chemicals, different battery research chemicals.

### 3. Other Consumables

TC1183M Cyanocobalamin, N20250 Fullerene C60 (Carbon 60), N23882 Graphene Nanopowder (C, 1-5 nm) 99.5+%, Indium nitrate 99.9%, TC1183M Cyanocobalamin, 193095 Polyacrylic acid, C 1086 Cerium Nitrate, C 1991 Chloro auric acid, C 0682 Chitosan, C 2545 Creatinine, C 2687 Cupric nitrate, S 1597 Sodium metal pieces, GR M 0072 Mercury AAS Standard Solution, N 1507 Nickel nitrate, P 1932 Platinum (10%) on charcoal, T 2377 Tris buffer GR, Z 0019 Zinc AAS standard solution ,Z 1267 Zinc nitrate GR ,S 1807 Sodium chloride GR ,Silicon dioxide -325 mesh, 84578 Acetonitrile (ACN) extrapure AR 99.5% ,31566 Acetone pure 99% ,30795 Nickel (II) Nitrate Hexahydrate extrapure AR 99% ,87144 Ferric Nitrate Nonahydrate extrapure AR ACS 98% ,41067 MWCNT type 4 Carbon Nanotubes Multi Walled, 45932 Sodium Phosphate Dibasic Anhydrous extrapure AR ACS,79088 Sodium Phosphate Monobasic Dihydrate extrapure AR, ExiPlus Multi-Compendial, 99%, 25536-Alumina(gamma) nanopowder, 31353-gadolinium oxide, 94118-silver nitrate AR, 94632-titanium dioxide anatage nanodispersion, 19302 Aluminium Nitrate Nonahydrate extrapure AR ACS 98.5% ,14388 Ammonia Solution extrapure AR 30%, 72918 Bismuth (III) Nitrate Pentahydrate extrapure 98%, 61871 Boric Acid extrapure AR ACS, 45899 Buffer solution pH 4, 97409 Buffer solution pH 7, 52031 Buffer solution pH 9.2, 57320 Cerous Nitrate Hexahydrate extrapure AR 99.9%, 74767 Chromium (III) Nitrate Nonahydrate pure 96-98%, 16842 Citric Acid Anhydrous extrapure AR ACS, 85942 Cobalt (II) Nitrate Hexahydrate extrapure AR, ACS 99%, Cobaltous Nitrate Hexahydrate, Choloro auric acid 99.995%, 46704 Cupric Nitrate Trihydrate extrapure AR, Nickel Nitrate, Copper Nitrate, Aluminium Nitrate, Hydrochloric acid, Nitric acid, Sodium Nitrate ACS 99.5%, 28580 Dimethyl Sulphoxide (DMSO) extrapure AR 99.5%, 18240 EDTA Free Acid extrapure AR 99%, 74841 Formamide extrapure AR ACS, ExiPlus Multi-Compendial 99.5%, 62673 Formic Acid extrapure AR 98%, 53931 Hydrazine Hydrate extrapure 80%, 59802 Iodine 1N Solution, 62986 isopropanol (IPA) extrapure AR 99.5%, 81034 Lithium Fluoride pure 98.5%, 32049 Palladium (II) Oxide pure 85%, 24693 Zinc Nitrate Hexahydrate extrapure AR 99%, 22249 Sodium Phosphate Monobasic Anhydrous extrapure AR 99%, 38028 Zirconium Sulphate extrapure 99.5, 46704 Cupric Nitrate Trihydrate extrapure AR ACS 99.5%, 28580 Dimethyl Sulphoxide (DMSO) extrapure AR 99.5%, 18240 EDTA Free Acid extrapure AR, 99%, 74841 Formamide extrapure AR ACS, 24693 Zinc Nitrate, 30795 Nickel (II) Nitrate Hexahydrate extrapure AR 99%, 87144 Ferric Nitrate Nonahydrate extrapure AR ACS 98%, 94632-titanium dioxide anatage nanodispersion, Hand Gloves, Filter paper, Teflon plate, glass slide, silicon wafer, Aluminium wire, Dialysis Tubing, vacuum pump oil, Laboratory liquid wash, cleaning solutions, wipes, disinfectants, hand wash, Universal Clamp, brush, etc.,

	<p>TEM grids, glass vials, NMR tubes, payment for external measurements, Fabrication of device and to post, spatula, columns, lab coat and other minor consumables etc, Reference and counter electrodes, AFM tips, Heating Elements for Tubular/Muffle Furnace, Furnace Repair: Tubular, Muffle Furnace, other consumable items, replacement of spare parts of equipments, maintenance of equipments other than computer, computer consumables, Aluminium alloys/ingots, metal powders, Screen printed electrodes, Graphite flakes (2.5kg), Infectious disease biomarkers (Influenza, HIV etc.), Cancer disease biomarkers (microRNA, breast cancer, prostate, oral etc.), Goat anti-human IgG-HRP (1mg/ml), Goat anti-mouse IgG-HRP (1mg/ml), SERS tags, Gold(III) chloride trihydrate (1gm), Tween 20, Bulk WSe2 (50 gm), Hydroxylamine hydrochloride, 11-Mercaptoundecanoic acid, MCA, and 4 MBA, Bulk MoSe2 (50 gm), Nafion (25mL), Vacuum Filtration assembly, Biosafety masks, Biosafety gloves (nitrile and powder-free gloves), Autoclavable polybags, Ti alloy powder for AM, Stainless steel powder for AM, CuCrZr AM powder, Copper billets/ingot/strips, Zirconium rods/strips/granules, Chromium powder/rods/strips/granules, Rare earths – Nb, Y, Ce, Ta, La, Analysis, Metabolites analyses, Farm Consumables, TLC Plates, Filter papers, pH papers, blotting paper, Planting materials, seeds, Chemical standards, Essential oils, Standard aroma molecules, Animal feed, Cell Lines, Agriculture accessories, etc.) GI sheet, Acrylic sheet, araldite, Metal wires, Cement, gravel, sand, steel molds for concrete block, Filter Paper, Whatman filter paper no 42, Whatman Glass microfiber filter paper, carbon tape, paraffin tape, copper tap, Fly Ash, Red Mud, FGD Gypsum, GGBS, Copper tailing, Spent Plotline waste, Ceramic Waste, Broken Sanitary Ware and other industrial waste etc., Kits for moisture removal from FTIR Kits for contaminant testing in water like fluoride spand, As Kit, Fe kits etc Other items as needed on requirement</p> <p>Analysis, Metabolites analyses, Farm Consumables, TLC Plates, Filter papers, Planting materials, seeds, Chemical standards, Essential oils, Standard aroma molecules, Animal feed, Cell Lines, Agriculture accessories, etc.)</p> <ul style="list-style-type: none"> <li>• TLC plates</li> <li>• NMR tubes</li> <li>• GC tubes</li> <li>• Cuvettes for UV Visible</li> <li>• Columns</li> <li>• TEM grids</li> <li>• Carbon tape, silver paste</li> </ul> <p><b>Burette stand with adjustable clamps Tweezers</b>  <b>Spatula</b>  Gloves Disposable  wipes Tissue paper  Petri dish  Glass-based distillation assembly Filter papers</p> <p>Battery research consumables such as cells, coin cells, etc.</p> <p>Other items as needed for the progress of the projects</p> <p>Consumables compatible with HACH DR6000 Spectrophotometer for water testing  Cement, river sand, coarse aggregate, Alumina tray, Sieves set, Polybags, Zip lock bags of different size, Karni sets, rugged bags, Cement (OPC, PPC), flyash, silica fume, LC3, nano clay, nano silica, curing compounds, reinforcement rebars, retarder, accelerator, superplasticizer, polypropylene, glass fiber, carbon fibre, natural fibers, sand, aggregate, slag, hose pipe, optical fibers, polyol, polyurethane, polyurea, steel and fabric textile for reinforcement, cutter, grinder, grinding and cutting discs, wire, etc.</p>
4.	<p>Glass wares (ex- name the different glass wares)</p> <p>RD bottles, pycnometer, Vacuum filtration assembly, Beaker, Petridish, Flask, reagent bottles, filtration assembly, measuring cylinders, and other lab accessories.</p> <p>RB flask (single neck, double neck), Beakers (various sizes), graduated cylinders, volumetric flasks, pipettes, Glass plate (for membrane casting), Glass rod, spatula, funnels,</p> <p>Buffer bottles, glass pipettes  Beaker, Patty disc, conical glass, water density bottle, round bottom flask, measuring cylinder, Chemical</p>

	<p>Storage Bottle, Sample Bottle, mixing reagents, and storing samples etc.</p> <p>Soxhlet Apparatus, Condenser, filtration unit (Micro, macro &amp; nano), Cover Slips, RB flask (single neck, double neck), Beakers (various sizes), graduated cylinders, volumetric flasks, pipettes, Glass plate (for membrane casting), Micropipette, Glass rod, spatula, Test Tube, Centrifuge Tubes (glass), Glass, Tray etc.</p> <p>Other glass items for research</p>
5.	<p>Plastic wares (ex- Name the different plastic wares)</p> <p>Polypropylene beakers (50ml, 100 ml, 250 ml, 500 ml, 1000 ml, 2000 ml), Polypropylene tray, Polypropylene Petridish, Polypropylene measuring cylinder, Teflon beakers 100 ml capacity, Microcentrifuge tubes 2.5 ml capacity, Tube box, centrifuge tube storage box, bottles, centrifuge tube, Tips, tip box, effendrof desiccator, Funnel, magnetic bar, petri dish, pipettes, test tube stand, Autoclave with Teflon liner 100 ml, PVC pipes, fitting and fixtures for gas exhaust and drain pipe of fume hood, etc.</p> <p>Lab used plastic wares, Tips, centrifuge tube, desiccator, storage box, Metal tray, Plastic tray, Mortar and pestle, Thermometer, effendrof, etc., Plastic tray, Beakers, Patty disc, pipette, bucket, Mug, Measuring Cylinder, Ampoules, Jar, Tray, Scoops, Tank, Bottle, Centrifuge tube, Powder Jar, etc. micropipette, rack, stir bars/beads, etc.</p> <p>Other plastic items for research</p>
6.	<p>Toner Cartridges</p> <p>Printer cartridges, 88A Black, Magenta, Cyan, yellow, black colour cartridges Different cartridges for printers</p>
7.	<p>Batteries, etc.</p> <p>Remote, watch, AA, AAA, rechargeable batteries, other batteries</p>
8.	<p>Gases (ex- tentative names)</p> <p>Ar gas, H<sub>2</sub>S, N<sub>2</sub>, CH<sub>4</sub>, C<sub>2</sub>H<sub>2</sub>, H<sub>2</sub>, CO<sub>2</sub>, O<sub>2</sub>, inert gases, etc., other gases</p>
9.	<p>Maintenance/AMC/repairing of existing equipment</p> <p>REMI centrifuge machine, doctor blade, Contact angle analyzer, UTM, Tribometer, microcompounder, sputtering, UV-Vis, electrochemical work station, furnaces, AMC of vacuum melting, Servo Control Compression and flexural Machine, Xerox Machines, Repair Existing Equipment's, Civil Maintenance, construction of platform, shelves, storage cabinates, chemical racks, cupboard, display room, Fabrication, erection, gardening pipeetc.</p> <p>Vacuum furnace, spin coater, plasma cleaner, high- grade vacuum pump, confocal microscope, Nano lithography machine, etc., other equipments for AMC</p>
10.	<p>Stationery items (ex- name a few)</p> <p>Tissue papers, Staplers, Punching Machine, Sticky Tapes, Scissors, Desk Tidy, Pen Cups, Note Holders, Paper Clip, Waste buckets, Porous Point Pen , Pen, pencil, cartiridge etc, Parafilm, Aluminum foil, ball pens, paper tray, Gluestick, register, pen drive, L-folder, Teflon tape, Binding tape, OHP, A4 paper, towels, duster, U Clips, etc, m Shoe Covers, Scientific Wipes, Nitrile Gloves, Vinyl Gloves, Freezer storage rack, Grid Storage Boxes, Nitrile Examination gloves, Glue stick, Gum tube, Highlighter, Index file, L-folder, Marker, Note sheet pad, OHP marker, Pen, Pencil, Paper cutter, Register, Rubber, Stamp pad, Stapler pin big- HD45, Stapler pin small, Stapler small, medium and big, Surgical Mask, U-clip, Xerox paper A-4, graph papers, labels stickers, paper clips, binders, folders and organizers, display bords etc.</p>
11.	<p>IT / software-related Items (Name the items required during year)</p> <p>Software licenses for data analysis, modelling, and simulation, Mont Carlo, M.S. Office, Origen Lab, Antivirus, Grammatical Checker software, etc. 42U Rack with 2 Tray for Devices, 4 Fan Tray and 2x12 Socket 32 Amp. Industrial PDU, Cable Manager etc. fully loaded with Accessories. 32U Rack with 4 Fan Tray and Dual 16 Amp 6 Socket Industrial PDU Cable Manager etc. fully loaded with Accessories, 15U Rack with Fan Tray and Dual 16 Amp 6 Socket Industrial PDU Cable Manager etc. fully loaded with Accessories, Patch Panel CAT6, 24 Ports Gigabit Moduler, CAT6 Patch Cords Factory Made 1/2 Meter, CAT6 Patch Cords Factory Made 2 Meter, CAT6A Cable Solid Coper 23AWG 305 Meter Box including Laying and Fitting Charges, Fiber Patch Cord SC to LC Single Mode OS 2 Meter, 12 Core Armoured OS2 OFC Single Mode with underground laying from new server room to existing server room in Meter, 6 Core Single Mode Armoured OS2 Fiber Cable in meter with underground or Celing laying from Switch to Switch or OutSide Biulding to Buildings,</p> <p>12 Port Fiber LIU Rack Mountable Fully Loaded</p> <p>Configuration of Network VLANs, DHCP Snooping, STP, InterVLAN Routing, Port Security etc. on Switches and Access Points, Punching of Patch panel, Cable Tagging and marking and complete pasive work installation included, HDL and LLD Documents required with Network Architecture Diagram, Design Development and upgradation of Web Portals of the institute for Digitization</p> <p>SMPS Crimping Tool Tool Kit magnatic LAN tool Kit LAN Tester</p>

	<p>LAN cable cutter  CMOS battery (Pack of 5)  Wal Clock (Saranjamshala, Conference Hall, IT) USB  Printer 3.0 Cable, 1.5  USB Printer 3.0 Cable, 3  USB Printer 3.0 Cable, 5  USB Printer 3.0 Cable 10 Mtr HDMI  monitor Cable 2mtr HDMI monitor  Cable 3mtr HDMI Display Cable  5mtr  HDMI Display Cable 10mtr / 15mtr/20mtr LAN  card (D-link Gigabit)  WiFi card (D-link Gigabit) PCI  VGA monitor Cable 2mtr Spice  Buster  HDMI Splitter 1 x 4  HDMI Splitter 4 x 1  LAN Cable Cat 6 (305mtr pack)  LAN Cable Cat 6A/Cat 7 (305mtr pack) Wired  Mouse  Wired Keyboard  OFC Patch card 3mtr LC-LC OFC  Patch card 3mtr LC-SC Pendrive  Wireless Mouse Keyboard USB  extention 3.0 - 2 Mtr Printer  Cartridge- Canon - 337  Printer Cartridge- HP- 137A - IT and ICT Infra HP  Printer Cartridge Color  USB Hub 3.0  Multi Point Hub C type to (LAN, C-Type, HDMI, USB 3.0 ets) 60 Hz 4K Batteries  AMC of Institute's website and Cpanel.</p> <p>HDMI Cable OFC 10/20MTR  LAN Cables (Cat6A/Cat 7) 305 Meter Box Slide  changer and Pointer,  Other Consumable item for the maintenance of existing ICT Infrastructure (LAN / Intercom)</p>
12.	<p>Furniture (Name the items required during year)</p> <p>Chairs, tables, almirah, storage box, Working Bench, Chairs, Tables, Chemical Bench, Chemical Storage Cupboard, File Cabinet, Elmira, Bookshelf, Computer Table, laboratory Stool, Sofa Set, Centre Table, Display Boards, Plastic sitting chairs etc.</p>
13.	<p>Electric Items (Name the items required during year)</p> <p>Web camera, headphones, keyboard, Mouse, Extension board, etc., Drills, DrillBit, Toolkits, Hand tools, Power-Tools, Measuring Tools, Wrench/Spanner, HDMI Cable, C type to HDMI and LAN port converter, Microphone with speaker for online meetings, Microsoft Office Software, AAA batteries, AA Batteries, Battery for Micrometer. Electronic, mechanical components i.e. embedded/SBC board, microcontroller, evaluation development board, electronic modules, electronic discrete components, electronic ICs, PCBs, copper wire, electronic sensors, SS sheet for strip development, brass material for mounting pins. Mechanical components and actuator</p>