

50 Innovative Products for Development

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Students are provided with well defined focused areas as listed below to pursue and develop towards a startup. Faculty of the college will mentor the interested students on the ideas/topics for development.

S. No	Problem/Innovation
1	Portable Battery/Fuel based Power Supply for Communications and Lighting designed to supply for a minimum duration during Emergency and Disaster – Flood/Storm/Quake/Landslides etc
2	Wireless Communication Techniques for Emergency and Disaster – Flood/Storm/Quake/Landslides etc
3	Wireless sensor networks for flood assessment – flow and level
4	Flood-prone area habitants' data-base
	Digital Methods for:
5	1. Soil Moisture Management Methods
6	2. Soil Moisture Assessment Methods
7	3. Soil Quality Assessment Kit
8	4. Irrigation-Water Quality Assessment Kit
9	5. Sub-surface Drip Irrigation System
10	Harvest Conveyors – Portable, quick-to-assemble and adaptable to gradient requirements with independent power supplies
11	Manual/Power driven Loading/Unloading Machines for agro-produce handling
12	Pit digging machine for plantation
13	Trench digging machine for pipe laying (drip irrigation pipe)
14	Quick Assembly, Portable, Precast Civil structures based Silos (rodent/pest free and weather free) for Grain Storage (measured) and Delivery (measured) along with facility for processing such as sieving/filtering/pulverizing/drying/packaging etc and storing thereon
15	Quick Assembly, Portable, Precast Civil structures based roof for low cost housing
	Garbage Management:
16	1. Free water removal system from Wet Garbage with further treatment of water
17	2. Water removal from wet Garbage by application of pressure with further treatment of water
18	3. Dry/pressed wet garbage Briquetting for general heating purpose
19	4. Kitchen waste to composting – Methods/techniques
20	Intelligent Taps – Auto-close on filling – no wastage, effective utilization, easy to maintain

21	Automatic Valve/Pipe failure detection and closing of appropriate valve/s to stop wastage in Water Pipe-Lines
22	Effective Dust traps as a standard element in construction for household and office purposes
23	Interlocked-Logic Systems for Safe Material Handling
24	Material Handling Management System for 3-D Storage, Retrieval, Delivery and Accounting
25	Container Design for retail products at super stores for Distribution, Storage, Access and Delivery
26	Template-less print-transfer technique for textile printing for a zero-pollution Industry
27	High wattage dual spindle equal and opposite direction rotation low weight and volume bldc motor for aviation
28	Micro Magnetic Switch (2 stable state to n-stable state) for tactile perception
29	Portable Traffic Management System for temporary use and for a designed duration of time using independently powered traffic lights along with any additional information
30	Tyre pressure indicating system for automobiles
31	Automatic Speed-Reducing System for safety of automobiles. It detects accident prone situation for all the vehicles concerned and reduces their speed automatically. Also, generates suitable audio and light alarms in the vehicles involved before it proceeds to do so when possible
32	Vehicles that automatically abide by Road Rules of the Land with automatic audio and visual alerts
33	Low cost, Low weight, 3 kW and 10 kW Steam/Gas Engine
34	Biomass/Agro-residues Burners for Process Heat
35	Solar Water Distillation Systems
36	Waste Plastic-bags Compaction-Rolling Machine for storage and transport of plastic garbage
37	Honeycomb structures using water/other waste plastic bottles for use as Partition Walls etc
38	Micro/Mini Solar Pumps – Single Stage Centrifugal
39	Micro/Mini Solar Pumps – Multi Stage Centrifugal, Submersible
40	Self-cleaning and maintaining Mud/Sand filter system for Drip irrigation
41	A System for quick development of prototype 3-D Surfaces and Textures
42	Shaft based (Gearless) 1-n Power Transmission/Distribution System
43	A Smart Campus-Assistant to assist movement and contact, and account all activities of a visitor on the campus
44	A Smart Traffic-throughput assessment system for use in traffic control
45	Moving Vehicle Seizing Fields/Roads/Paths for Defence application
46	Real-Time Discharge, Recharge, Level and Head parameter sensing and acquisition for bore wells
47	A System that assembles holes, tapped holes and bolts into a plate/surface in terms of elements such as bushes and threaded bushes and bolts, along with spacing elements and filler for rapid prototyping
48	CSP autoclave/furnace for pottery/earthenware/earthen pipes
49	Design of a Propeller Fan system with adjustable orientation of fan axis in 3-D
50	Variable area Jet-Nozzle Design for Jet Engine