

**DETAILS OF PROJECTS SUPPORTED UNDER TECHNOPRENEUR PROMOTION
PROGRAMME DURING THE YEAR**

Project Proposals Approved During the Year 2011-12

Sl. No.	Name of the project
TePP Phase I	
1	Improved special design water tap for public hydrants and domestic use
2	Development of a commercial product – Digital Protractor
3	Continuous ethanol fermentation from Mahua flower by using packed bed bioreactor with immobilized yeast for production of industrial grade ethanol
4	Instant non-invasive hemoglobin and blood sugar analyzer
5	A damper controlled above knee prosthesis
6	Scale independent pilot model design of bio-gas purification from agro industrial waste
7	Design and development of Fresnel moulds, lenses and goods
8	Crankshaft metrology system
9	Fitment removal cum lifting/lowering arrangement for draft fear of wagons of Railways
10	Fabrication of low cost lab scale electro-spinning machine
11	Open ocean farming structures for the cultivation of commercially important Indian Seaweeds
12	Multi line refreshable Braille display
13	Scientific development and validation of a herbal drug for Diabetic –Neuropathy
14	Innovation of high performance cricket leg gear
15	Development of device for testing minimal antibiotic concentration for biofilm eradication
16	CNG Magnetorherological finishing machine
17	Development of bio-medical engineering application toolkit and development of Steth ECG Stress ECG,, Smart Bed among others using the modules of BEAT
18	Tarang Pariwartak – generating electricity from Ocean waves
19	Bullock drawn improved multi crop seed cum fertilizer drill

Sl. No.	Name of the project
20	Novel and affordable emergency modification system for school children
21	Content sharing on TV
22	Digital hot gold foil stamping/ embossing machine
23	An improved oropharyngeal airway
24	2 in 1, Self Secured Orthodontic spring separator for predictable separation of teeth in orthodontic patients
25	Development of prototype of flat bed 3-axis PC controlled vertical NC milling machine for sculptured surface machining for ornamental wood carving
26	Interactive Surfaces – Multi-touch walls and tables
27	A machine for interpretation and diagnosis of heart conditions based on ECG using expert system
28	Low cost device for notifying the presence of water borne diseases (pathogen) in community drinking water
29	Production and testing of selected Probiotic products as poultry feeds
TePP Phase II	
30	Development of process technology for production of photographic films
31	Banana fibre separator machine
32	Tractor mounted pulveriser
Micro-Technopreneurship	
33	Controlled motion in ironing through automation
34	Alternative growth medium for rice straw mushroom for increasing production per unit space
35	Development of a preservative and carrier by spores of entomopathogenic fungi with biological control applications
36	Manual Compressor
37	Continuously controlled electronic servo mains voltage stabilizer
38	Fuel theft alert system
39	Mechanical Porter
40	Multi angle power weeder
41	Electric assisted hydraulic rickshaw
42	Coconut fibre as suture material
43	Prototype development of low cost non-invasive glucometer
44	HEPCO beverage (a herbal and fruit beverage with medicinal & nutritional properties)
45	Health insoles/footwear
46	Data accumulation of a player in live sports

Sl. No.	Name of the project
47	Wireless voice assistant for the dumb
48	Cost effective cell phone controlled AC and Car lock system
49	Developing novel photo catalysts fir photo degradation on various dyes without pre-treatment
50	Character recognizer for physically impaired using MEMS based wireless system
51	Mobile control military operation in a defence vehicle as a lab model
52	Audio sensing assistance for deaf people
53	Mobile phone detector in aircraft
54	Surveillance snake robot
55	Intuitive tele-controlled machine arm
56	Quick (1 hr) treatment of dyeing industries effluent and recycling treated waste water for dye house again

COMPLETED PROJECTS

- 1 Development of a modified chess game (TS)
- 2 Development of a prototype of newly invented muga reeling machine (TS)
- 3 D-Red motor cycle (TS)
- 4 Novel plant tissue culture medium from bio-waste(fly-ash) (TS)
- 5 Development of a fuel flexible multi-draft thermal biomass gasifier (TS)
- 6 Water tank auto shut off with alarm(WATASA) (TS)
- 7 Jewellery from indigenous natural fibre of Assam (TS)
- 8 Improved special design water tap for public hydrants & domestic use (TS)
- 9 Medical surfactants
- 10 Development of indigenous micro-carriers for large scale cell culture
- 11 LPG fueled iron box
- 12 Cost-effective V-trough flat photo-voltaic modules
- 13 Prototype development of heating/cooling apparel
- 14 Design and development of a holographic pulse portrait camera system
- 15 Development of a herbal skin nourishing gel
- 16 Control release crop fertilizer with additives
- 17 Real time flight data analyzer
- 18 Active bioconjugates 2-O alpha pyranosyl L-ascorbic acid
- 19 Multi-crop portable circular oil expeller

Sl. No.	Name of the project
20	Fully automatic cashew-nut breaking machine (TS)
21	Solar wafer/cell inspection equipment
22	Design and development of a DNA fingerprint based photopolymer hologram reader/writer for Personnel Identification and Security
23	Process optimization and production of novel probiotic consortium (Synshrimp) for eco-friendly shrimp farming
24	Optimization of production technology for the commercialization of Shrimpaetiva (Algal Bioactive) for proactive Shrimp disease management
25	Intralock intravenous canula
26	Design and development of Pain Relieving instrument for Musculoskeletal pain
27	Development of first Indian Re-engineered stabilizer for beating heart surgery
28	Effect of auditory feedback using Smart-shoe on GAIT parameters in patients with stroke
29	Electronic retrofit kit for Cam Dobby
30	Manual compressor (TS)
31	AnaeMedia Prick hemoglobin measuring device
32	Bio-razor : semi-automatic Blood Chemistry Analyzer
33	Development of Piezoelectric Transformers
34	Innovation on Normal Scaife i.e. GEM-Polishing wheel for gem polishing application
35	Faucets (washbasin and bathroom taps) with independent control of temperature and flow (TS)
36	Testing of pollution control device, dry scrubber at ARAI, Pune
37	Self propelled 3-row potato seeding device
38	Design of eco-friendly leisure boat
39	Customized vermi-compost production
40	Increase in productivity of Spirulina(TS)
41	Design and development of water disinfection process controller(TS)
42	Electric steering car(TS)
43	Foot operated mechanical fingers
44	Automatic cooler regulator
45	Alkali lignin products & cooler pads from dry pine needles(TePP Phase-II)
46	Quick (1 hr) treatment of dyeing industries effluent and recycling treated waste water for dye house again
47	Control of bio-fouling in ships and atomic power station cooling system

Sl. No.	Name of the project
TePP ON-GOING PROJECTS [as on 29.12.2011]	
TePP Phase I	
1	Areca nut peeling machine
2	Stored Heat Cooker
3	Direct Current Transformer
4	Elliptical Machining Bed (EMB)
5	Design improvement of Mangal Turbine
6	Tamper proof electronic lock
7	Buttonhole machine
8	Manually operated water pump
9	Seamless Weaving Machine
10	Visual events recognition on a chip
11	Soap less washing machine
12	Vessel cleaning machine
13	Development and commercialization of electric fences
14	Automatic vending machine
15	Growth stimulator for plants
16	Technology up-gradation of Ayurvedic Bullet Proof Jacket
17	Modified wood stove
18	NUALGI for growth of Diatom algae
19	High speed wireless sensor data acquisition system
20	Auto compression sprayer
21	Intelligent LP Gas Detector (IGD)
22	Salt harvesting equipment
23	Inhaler for insulin administration
24	Product Hairminator for validation of Hypothesis – Cytotoxic Lectin Inhibit growth of Hair follicle
25	Technology upgradation of Telescopic Bronchoscope
26	Development of groundnut separator machine
27	Development of different variants for mobile operated switch
28	Design and development of temperature indicating chalks
29	Development of Arrowroot grinding machine

Annexure-10-Contd.

Sl. No.	Name of the project
30	Development of advanced model of pomegranate deseeding machine and procuring certifications to meet the requirement of the export market
31	Development of water flow electronic controller for household water tank
32	Development of Walnut cracker machine
33	Guided crank PIN design IC engine
34	Stem cell marker protein CD44 in cancer diagnosis: development of an immuno-diagnostic kit
35	SN Door Wind Mill
36	Development of low cost, high performance LED based home illumination system for rural and tribal areas
37	Prepaid cash card for ATM system for electric bill
38	Prototyping Chandrapabha water gun (Rain Gun) and trial runs for testing the durability, acceptability, replicability etc.
39	Digital controlled precise dispensing valve for liquids under gravity flow
40	Pooga sizing machine
41	Promotion of Rapid Thrombocek Test Kit
42	Mrityunjay – An Advanced Electronic Distant Patient Monitoring System
43	Merlyn D3 Low Cost Modular Bomb Disposal Robot with Flexible Chassis System
44	Drishticare-a tele diagnosis platform for retinal experiment
45	Laryngotracheal stenosis
46	Low cost multi-media projector
47	Micro controller based custom designed overload relay
48	Scale-up and standardization of an economical commercially viable laboratory process to isolate γ -Oryzanol from the waste products arising out of rice bran oil refineries
49	Focal length independent, high resolution wide frame, camera array & X-ray Imager
50	Device and process to capture losses due to weather event in any specific geographical coordinate
51	Pickling acid recovery using diffusion analysis
52	Ball press washer for cleaning and crushing biological raw materials
53	Lengthwise Zig-zag cutting of steel coils
54	Synthesis of nanocrystalline HAP and sintered compacts of the same
55	Shoe brush with wax polish
56	Bath Brush
57	Development of aqueous metal oxide based super capacitors
58	Heart throb-portable generic multi factor medical measurement unit
59	Automated scan lock

Sl. No.	Name of the project
60	Variable length pedal-crank assembly with doubling of torque
61	Steerable Headlights
63	Shoulder harness helmet
64	Development of friction stir welding process
65	Innovation of Ultraclean electro stag refined technology/cost effective substitute for clinical applications
66	Development of a wireless sensor network & communication protocol in underground mine environment
67	Microprocessor based lubrication flow and inductive sensing and controlling device
68	2-D Nano-Positioner
69	Development of a commercial Rheometer for High Performance Concrete
70	Slow-release multi-micronutrient zinc and boron based fertilizer
71	Intelligent fuel pump calibrator
72	Smart solar irrigation unit
73	Design & development of dynamic stretch comfort measurement device for sport and healthcare application
74	Low temperature heat engine
75	Design & development of domestic monoblock pump without shaft
76	Fermenter – microprocessor based controller with GSM mobile technology
77	Design & development of a prototype of a digital textile printing machine
78	Pilot plant desalination of sea water
79	Integrated security management
80	RSW Chiller
81	Simultaneous production of multiple digestive enzymes from microbial sources
82	Planar inverted F-antenna for mobile communication (PIFA)
83	Development of Customized Audiometer
84	Development of Bhavana's Procto Tub
85	Banana cotton separator
86	Manually operated wheat reaper
87	Development of improved seed drill
88	Instant sewage treatment plant (e-STP)
89	Portable front-loaded washing machine without concrete structure
90	Product development of sugarcane bud chipper

Annexure-10-Contd.

Sl. No.	Name of the project
91	Development of Star Node Circuit Breaker (SNCB) for newly invented midget transformers as well as for some presently available conventional transformers
92	Multimodal interaction systems for urban children for playing computer games
93	Bathrooms for the safety of elderly
94	Design of novel plant bioreactor
95	Fabrication of high energy planetary mill and low temperature synthesis of tungsten-carbide & cobalt composite powder at nano scale using the same
96	Portable microchip slide projector (teaching aid)
97	Development of sensor-based systems for estimation of Fluoride and E. Coli in drinking water
98	Development of filler grade PTFE powder and recycling PTFE scrap material
99	Bathrooms for the safety of elderly
100	Products designed to maintain temperature without the need of continuous power
101	High energy density capacitor development
102	Light duty variable displacement compressor
103	Retractable auto disposable syringes
104	Multi-radio data communication system for wireless Active RFID/Sensor network
105	Synthesis of carbon nanotubes loaded with metal nanoparticles for application as electrodes in fuel cells
106	Natural potassium extract from agricultural organic source
107	Nutraceutical composition containing egg yolk derived anti-diarrhoeal agent
108	Prickly pear (OPUNTIA) Products – The New Emerging Nutraceuticals
109	Bio conversion of feather – A poultry waste to high nutritive value feed using keratinases
110	Municipal solid waste Window Turner
111	Solar powered DC/BLDC motor operated kerosene dispensing unit with biometric/bar code access control for PDS
112	Development of cost effective new generation electronic energy meter for domestic use
113	Bulk synthesis of carbon nanotubes
114	Non-electric water level indicator
115	Handwriting improvement slate
116	Digitally controlled three dimensional billboard
117	Peptone biotech
118	Multi-level automated two-wheeler parking unit
119	Application turned lacquering process on solid bamboo species to make non-toxic, eco-friendly toys and accessories for children

SL No.	Name of the project
120	Indian sink utensils washer
121	Electrical transmission tower damaged protection monitor
122	Vaneer laminated lumber
123	Development of ELISA kits for Thyroid Stimulating Hormone(TSH), Thyroxine (T4) and 3,5,3 – Triiodothyronine (T3)
124	Embedded hardware based security solutions
125	Automated multilevel modular system for parking vehicles
126	Recycling of Tungsted Carbide Scrap Material by a cost effective process
127	Evolutionary glass slumping technology within the realms of art, architecture and sciences
128	ACCEPTOR
129	Community lighting from the use of hand pump
130	Project Y-Cook – Convenient to eat, multi dish just eat food in thermoformed interlock-able multilayer rigid containers
Micro-Technopreneurship	
131	Energy efficient electromagnetic motor
132	New ocean wave energy harvesting system.
133	Design and development of switched reluctance (SR) submersible motor
134	Vision system for automatic inspection of rectangular sensor devices
135	Evolution of some Ayurvedic formulation for their potentiality in the cure and management of diseases like cancer, diabetes
136	Digital valve controller P/N:DVC 02.
137	Development of speech enabled chest vibrometer
138	Development of bioactive wound dressings
139	Indirect type solar drier for processing food products
140	Development of filtered air supplying device for helmets
141	Vehicle driver monitoring system
142	Insype
143	Wireless transmission of power
144	Mobile presence authentication system
145	Development of multi-layer scan able voice output communication aid and special access switches
146	Development of a novel method for biometric recognition
147	Portable refrigerator
148	Micro-mouse

Annexure-10-Contd.

Sl. No.	Name of the project
TePP Phase-II	
149	Design and development of Mechatronic Flyer Frame for Cotton Spinning
150	A rotary apparatus adopted to perform as a variable compression ratio IC engine.
151	Alkali lignin products & cooler pads from dry pine needles
152	Tea & tea based herbal health drinks
153	Heating/cooling apparel and accessories
154	Testing, trials & validation of prefabrication technology(PFT) developed products
155	Design and development of 3GPP LTE (Long term evolution) cellular products for base station, CPE (Customer Premise Equipments) and WiL TE (Wi Fi+LTE) based femtocells