DEPARTMENT OF RESEARCH & DEVELOPMENT - IEDC

3.1.3 Number of research projects per teacher funded by government and non-government agencies during the last five years (For UG Colleges weightage of this metric will be 7) (4)

2018-2019

Sl.No.	Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/Co-investivator	Department of Principal Investigator	Amount Sanctioned	Name of the Funding Agency
1	Pulse sensing in your hand using Andriod Development	Mr P Sudhakar	COMPUTER SCIENCE AND ENGINEERING	250000	**NSTEDB DST**
2	Compact Information & Location Identity cards (CIL)	Mr G Hariharan	COMPUTER SCIENCE AND ENGINEERING	250000	**NSTEDB DST**
3	Design of Fixtures for Mophed Scooter conversion into Electrical Vehicles	Mr. V Indra Teja	EEE	250000	**DST NSTEDB**
4	Construction of low Cost brushless DC motor for Moped electric vehicles	Dr V Suryanarayana	COMPUTER SCIENCE AND ENGINEERING	250000	**NSTEDB DST**
5	Solid Waste Management	Dr K V Padma Priya	SCIENCE & HUMANITIES	250000	**NSTEDB DST**
6	Converting Plastic to Real Fuel (CRPF)	Dr K V Padma Priya	SCIENCE & HUMANITIES	250000	**NSTEDB DST**
7	Designing of mono to Multi Wheel EV Chargers	Dr Dola Sanjay S	ECE	250000	**DST NSTEDB**
8	Lithium-ion Lithium iron phosphere & Nickel-Cobalt battery cell assembling unit at low cost	Mr. V Indra Teja	EEE	250000	**DST NSTEDB**
9	Smoke Detection in Tobacco warehousing using Arduino	Dr M Nagabhushana Rao	COMPUTER SCIENCE AND ENGINEERING	250000	**DST NSTEDB**
10	Automatic Self Booking Cylinder	Prof.S.Jagan Mohan Rao	ECE	250000	**DST NSTEDB**
11	New Gen IoT Industrial Helmet	Prof.S.Jagan Mohan Rao	ECE	250000	**DST NSTEDB**
12	Wireless Communication Network for Building Monitoring	Dr.B.S.Sathish	ECE	250000	**DST NSTEDB**
13	PRO-MAC Progressive mechanized air conditioner	Mr.Bhavnarayana.K	MECHANICAL ENGINEERING	250000	**NSTEDB DST**
14	Optimal recirculation aqua system	Mr. V Nagarjuna	MECHANICAL ENGINEERING	250000	**NSTEDB DST**
15	IEDC GRANT 2018-19	Dr K Kalyan Chakravarthy	MBA	1000000	**NSTEDB DST**
16	New drone technology for pesticide spraying	Mr. P. Rajesh	MECHANICAL ENGINEERING	250000	**NSTEDB DST**
17	ICPS	Dr.Jarabala Ranga	EEE	900000	**DST**
18	Enterpreneurship Awarness Camp(EAC)	Dr. G. Kishor Babu	EEE	1000000	**DST-NIMAT**
19	Enterpreneurship devlopment programme(EDP)	Dr. G. Kishor Babu	EEE	200000	**DST-NIMAT**

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DEPARTMENT OF RESEARCH & DEVELOPMENT - IEDC

3.1.3 Number of research projects per teacher funded by government and non-government agencies during the last five years (For UG Colleges weightage of this metric will be 7) (4)

2017-2018

Sl.No.	Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/Co-investivator	Department of Principal Investigator	Amount Sanctioned	Name of the Funding Agency	Page No.
1	Design and development of aligners using 3D printing technology	M.Ekambaram	MECHANICAL ENGINEERING	250000	NSTEDB DST	3
2	Low Cost Head Gear and Nose Mask for Working personnel	Mr.K.Radha Krishna	MECHANICAL ENGINEERING	250000	NSTEDB DST	3-4
3	PIR Sensor Based Energy Saving Device	Mr R L R Lokesh Babu	MECHANICAL ENGINEERING	250000	NSTEDB DST	5
4	Farmer Friendly Sonic Pump	Mr K Bhavanarayana	MECHANICAL ENGINEERING	250000	NSTEDB DST	6
5	Advanced Portable Refregerator Machine	Mr K Bhavanarayana	MECHANICAL ENGINEERING	250000	NSTEDB DST	7
6	Silver carbon filter for water bottels	Mr.V.Sai Surendra	MECHANICAL ENGINEERING	250000	NSTEDB DST	8
7	Electrical floor mopping machine	Mr Ch S K D Pradeep Kumar	EEE	250000	NSTEDB DST	8-9
8	E-Commerce platform for Aqua -Culture	Mr P Chakradhar	COMPUTER SCIENCE AND ENGINEERING	250000	NSTEDB DST	9-10
9	Smart Phone App for checking Dissolved Oxygen in Fish Ponds	Dr.A.Daveedu Raju	COMPUTER SCIENCE AND ENGINEERING	250000	NSTEDB DST	11-12
10	Portable mechanical weeding unit	Mr.K.Sudhakar Babu	MECHANICAL ENGINEERING	250000	NSTEDB DST	12-14

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2017-2018

Sl. No	Team/Project Description	Project status at beginning of the Year	Interventions made	Current status
1.	**Team:** • K.Jeevan Sagar • T.Eswar Ramki • S.Sai Dhanush • M.Maniratnam **Mentor:** • Mr.M.EKAMBARAM Assistant Professor RCEE **Project:** Design and development of Aligners using 3D printing technology.	• Two patients has been treated so far and initiated to approach dental colleges in Vijayawada. • College has MOU with CTARS, Chennai • In a process of setting up Centre of Excellence in Manufacturing of Aligners.	• One of the patients is still continuing the treatment using the 3D printed Aligners without facing any discomfort and any health hazards. • Students publicize the product in college display boards. • Making awareness about the product in class rooms and social medias	• Prototype of the Product is completed. • One of the students is undergoing treatment. • Taking steps to market the product. • Planning to sign MOU with St.Joseph Dental College, Duggirala, Eluru.
	 			
2.	**Team:** • T.Subbarao • K.Pannagesh • K.Sivasankar • D.Likhitha **Mentor:** • Mr.K.Radhakrishna Assistant Professor RCEE	• Establish MoU with impact Engineering solutions start up will be set up shortly , next version of masks will be developed in the college • During trial	• Student visited Sandya Aqua export, Pamarru village on 06/02/2018 and identified the problem that the workers	• Prototype of the product is completed • Taking steps to market the product.

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	Project: **Low cost head gear and nose mask for working personal**	**with Sandhya Aqua export cold storage workers, team received positive feedback and instructed to make some advancements.**	**who are working in cold storage at low temperature (i.e. -20^{0}c) without having any suitable mask.** • **Student visited Blue park sea foods Pvt. Ltd, Pamarru village on 07/06/2018 and identified the health hazards caused while working in the low temperature environment like breathing disorders, nasal respiratory problems were identified.** • **Student visited Jute mill in Eluru on 20/03/2018 identified the health hazards like problems in lungs related to respiratory and breathing problems**	

			while working.	
	 			
3.	**Team:** • **Mohammad Salma Bajid** • **Pakalpati Maneesha** • **Maddula Neelima** • **Dasari Shanmuk** **Mentor:** **RLR. Lokesh Babu** **Assistant Professor** **Project:** **Passive Infrared Sensor based energy saving device.**	**<u>Product Development:</u>** ▪ **Two prototypes versions are developed by reducing the detection time without having time delay.** ▪ **The following are the product specifications** **<u>Product dimensions:</u>** ▪ **Length: 850mm** ▪ **Width: 40mm** ▪ **Height: 250mm** **<u>About sensor:</u>** ▪ **Voltage: 5V – 20V** **Power Consumption:65mA**	• **Planning to add Light Dependent Resistor (LDR) for better improvement for power saving.** • **Improved prototype made to respond to the detection of sensor with less in time.**	• **Installed in college campus** • **for awareness and testing purpose.** • **Suggestions/feedbacks taken from students, staff and started working on that aspect.** • **To make prototype with minimal space consumption.**
				

4.	**Team:** **V.Tarun Teja** **M.SaiKrishna** **V.Bala Manohar Sai** **D..Murali** **Mentor:** **Bhavanarayana. K** **Project:** **Farmer Friendly Sonic Pump**	**Review of the Sample idea with Research solution** **This sonic pump Runs on DC supply so no need of AC power source** **It has a self-power unit to carry any where** **Major advantage of this pump is it can operate even in remote areas where no power is available.** **It is also useful for agriculture and nursery maintenance** **On one complete charge it will run up to 100 minutes and above** **It sucks water from up to 11 feet below and deliver up to 15 feet height** **It is a multipurpose pump, it can use in municipality works especially repair of leakage water pipe lines**	**1. Analyzed the actual Pump and its consumption.** **2. Researched and identified problems in the existing pumps** **3. Designed a theoretical analysis** **4. Integrating the components to execute for optimize output** **5. Testing**	**Product with Proto Type**

	  			
5.	**Team:** **Y.Prudhvi** **S.Harsha vardhan** **N.Madhu** **V.Lakshman** **Mentor:** **Bhavanarayana.K** **Project Description:** **Advanced Portable Refrigeration Machine**	• **This machine helps to chill the huge amount of liquids with in less time** • **This machine helps to dropdown the temperature of any liquids in less time.** • **It can replace ice blocks for hygiene purpose** • **Equipment cost is very less than compared to existing machines used for huge cooling capacities** • **It is portable and easy to carry anywhere.** • **Higher chilling rate** **Review of the Sample idea with Research solution**	**1. Analyzed the actual refrigeration system and in process of freezing of liquids.** **2. Find out the drawback in existed Machine** **3. Designed a theoretical analysis** **4. Integrating the components to execute optimize output** **5. Testing and result**	**Product with Proto Type**

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6.	**Team:** **B.V.Subrahmanyam** **Md.GulshanAli** **P.DurgaPrasad** **B.Sai Kiran** **Mentor:** **Sai Surendra** **Project Description:** **Carbon Filters For Water Bottles** **The Main Objective of this project is to fit a water filter for the portable water bottle of any dimensions to remove the impurities in the water at the time of drinking itself**.	**Review of the Sample idea with Research solution for individual water bottles of 0.5 lit to 2.5 lit**	**Based on the survey we Identified some problems in the design of the bottle and filters are changed as per the feedback taken from different sources (both domestic and industries)**	**Product with Proto Type is finalized awaiting confirmation from municipality for safety certificate. Planning to tie an MOU with local distributors.**
	 			
7.	**Team Members:** **1- M.Nikhil** **2- D.Satish kumar** **3- S.Vernika Nageswari** **4- A.Mounika Rajyalakshmi**	**1. Designed ergonomically as an innovative gadget for ease of handling.** **2. Engineered for dry and wet cleaning, attached with a water container for spraying.** **3. Incorporation of**	**1. Analyze the different floor mopping machines available in the market.** **2. Incorporation of small and powerful motor,**	**1. Developed prototype, product development is completed.** **2. The product is tested for**

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	Mentor: **CH.S K.B Pradeep Kumar** **Project Description:** **Electric Floor Mopping Machine** **The objective of the proposed project is to design and development of electric floor mopping machine which could be easy to transport and maneuver. The proposed mopping machine comprises of simple motors and water spraying system. This mopping equipment can be used for household applications as well as in industries, malls etc., where the cleaning area is large.**	**small and powerful motor, batteries for automation which considerably reduce the overall size and weight of the machine.** **4. Designed with maximum performance for optimized mopping and cleaning, the corners which are hard to reach.** **5. Utilization of locally available material.**	**batteries for automation which considerably reduce the overall size and weight of the machine.** **3. Initially the design is framed using steel for telescopic handle and tripod frame due to which the overall weight of the product is increased.** **4. Updated with plastic tripod and telescopic handle for reduction of weight and friendly user.**	**different speeds, different mops with different mop sizes. Also updated on the levels water spraying system.**
				
8.	**Team:** • **J Pavan Kumar** • **K L N Vally Priya** • **N S Pavan Kumar** • **V Sri Rama Devi** **MENTOR:** **P.CHAKRADHAR** **Professor** **Project: Development of E-Commerce Platform for Aquaculture.**	**<u>Process development:</u>** **Web portal have been developed using word press interface and provided information pertaining to precise aqua farming, feed, seed, medicine, Equipment and other**	• **In the processes ofdeveloping web portal students contacted many distributors of seed, feed, equipment, and**	• **Based on web portal launched taking steps to market the product to aqua farmers, feed suppliers,**

		useful information. **<u>Product URL:</u>** **missionaqua.com**	**medicine for precise information and rates.** • **Making awareness about the portal, students met Fisheries and Aquaculture Department officials, Aqua farmers, Aqua product manufacturers and suppliers.** • **Students promote the Product by publicize in social media.** • **Due to the current work aqua farmers will get tremendous benefits and enable farmers for finding solutions pertaining to aquaculture**	**and prospect customers.** • **We are planning to include online payment option.** **Taking steps for company registration.**

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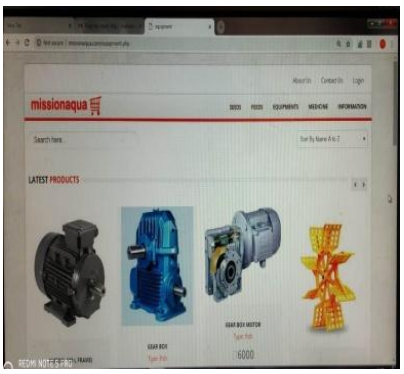
			products. Aqua farmers got harvesting techniques and mentor assistance on 24*7 basis.	
				
9.	Team: N. Siva Chandana A. Rushi P. Salomi J. Hari Krishna Mentor: Dr. A. Daveedu Raju Project Description: Smart Phone App for Checking Dissolved Oxygen in Fish Pond Development of Android application for real time monitoring of dissolved oxygen	1. Requirement gathering, Such as information of various sensors available in the market. 2. Case study of the available DO sensors that are used by farmers, noticed that are not affordable by small scale formers. 3. Consulted various experts of IoT, Java, Python.	1. Done survey at aqua formers and ponds visit. 2. Had interactions with field workers at ponds. 3. Studied the instruments that the formers are using for finding the dissolved oxygen. 4. Various electronic instruments are studied that related to IoT. 5. IoT devises that related to Dissolved Oxygen are investigated.	1. Developed a prototype. 2. The product is testing for different water samples, at aquariums.

	levels in fish ponds. The fish will sustain its life if and only if it acquires the required oxygen in the water. The levels of this oxygen should be monitored constantly to avoid the reduction of oxygen levels in the water. This oxygen levels are increased by rotating the aerators on top of the water surface. Without human intervention DO levels are informed to frmers by message to their mobile.			
				
10.	**STUDENT TEAM:** • **Md. Hussain** • **I.V.Prudhvi Raju** • **R.Pavan** • **M.Mounika**	• **West Godavari has about 5.18 lakh hectares of agricultural land, about 5, 81,312**	• **Removal of weeds through rotary motion of unique blade**	• **Prototype of the product is completed.** • **Taking steps to**

	MENTOR: **Mr.K.SUDHAKAR BABU** **Assistant Professor** **RCEE** **Project Description:** **Development Of An Affordable And Portable Weeding Machine For Effective Weed Removal** **The objective of the proposed project is to design and development of Portable weeding machine for effectiveweed removal . which could be easy to transport and maneuver. The weed control is one of tedious task in agriculture Concern about herbicides polluting ground and surface water, human health risks from herbicide exposure. development of herbicide resistance and the lack of approved and effective herbicides for minor crops such as vegetables, are the major factors**	**farmers are involved in agriculture.** • **Weed control is one of the most tedious tasks in agriculture, which accounts for a considerable share of the cost involved in agricultural production.** • **Manual weeding usually requires 300 to 500 man hours/hectare which is about 25% of total labour requirement.**	**assembly.** • **This machine involves simple mechanism and operation requires less manual effort compared to conventional weed removal technique.** • **Light weight and Low cost compared to present available weeding system (which is of Rs 65,000/-).**	**market the product.**

	driving the present and increasing interest in non- chemical weed control			
				

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