



Vivekananda College of Engineering & Technology

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Projects
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MECHANICAL ENGINEERING PROJECTS LIST -AY 2020-21						
SNo	Dept	Guide	USNs	Title	Status	Abstract (100 words)
1	ME	Mr. Naveenakrishna P V	4VP17ME022 4VP17ME023 4VP17ME029 4VP17ME034	Agri Mini Dumper	Working	As we know most of India's population depends on Agriculture. And Farmer is the backbone of our country. In our area areca nut, coconut is the major crop. One of the major problems associated with agriculture is the lack of labors. Due to this many young farmers are will quit farming and migrate to cities. During harvesting of areca nut, areca nut is to be transported from plantation to the place of storage. Since lack of labors, farmers will be facing difficulties. Many mini dumpers are available in market, but those dumpers will no satisfy required condition and cannot be 100 % efficient. In order to solve these problems, we have developed a mini dumper. In this we have converted Auto rickshaw into mini dumper. we can find some dumper in marker where it has some of the disadvantages. In this we have used Auto rickshaw engine which has more power compared to other dumpers. We have designed it in a condition so that it can easily move in the middle of plantation. It also has gear system, by which it can get more power. It also has good mileage it will give up to 20 km / liter of petrol. We have used jack mechanism instead of hydraulic which reduce the cost of dumper. It can travel in muddy, intricate places. This dumper is mainly focused on low cost, easy to operate.
2	ME	Mr. Harish S R	4VP16ME044 4VP17ME409 4VP17ME410 4VP16ME050 4VP09ME028	Automated Sand Sieving Machine	Working	Construction of buildings requires sand as an important ingredient Sand is used at different stages in construction right from the foundation to the finishing work i.e. plaster. This sand is needs to be screened properly for various stages in construction, i.e. size of sand for construction work is

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					slightly coarse whereas that used for plaster work is fine. Conventionally screening is normally done manually using fixed screens or machines. This manual process is time consuming and labor extensive involves a lot of time and cost. These processes are carried out manually. Sieving of sand is carried out using rectangular mesh which is inclined at certain angle. This causes a relative motion between the particles and the sieve. Depending on their size the individual particles either pass through the sieve mesh or retained on the sieve surface. There are different machines that are being used for sand sieving processes. In the proposed project, the sieving process will takes place through mechanical automation. Thus reducing the time consumed during the whole process.	
3	ME	Mr. Naveen SP	4VP17ME024 4VP17ME028 4VP17ME042 4VP17ME072	Design And Development Of Automatic Sapling Planter	Working	India is the second largest producer of agricultural products in the world. In India transplanting of saplings from the nursery to the field is done manually all over the country, as no machine is yet available in the market commercially for this work. High labour requirement and shortage of labour during peak transplanting season causes delay in transplanting and affects timely operation. The basic requirements for all small-scale transplanting machines are they should be suitable for small farms, simple in design and automatic. An automatic planter machine is to be designed to improve planting efficiency. Farm mechanization aims at higher production rate. Many operations in agriculture are now being performed by machines but large machines cannot be operated in these small farms. Also our farmers cannot afford to buy large costly machines. This sapling planter machine can also be used in planting saplings in the forest



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					areas thus contributing in afforestation.
4	ME	Mr. Naveenakrishna P V	4VP17ME060 4VP17ME059 4VP17ME044 4VP17ME070	Design And Development Of Compact Seed Collecting Machine	Working A large majority of people in our country depend on agriculture for their living. However, India's agriculture sector still lacks a lot of technology. As a result, the overall yield obtained from a given area is significantly lower than in developed countries such as the United States of America and Israel. As a result, it is true that we must use new technology in our country's agricultural sectors to increase yield. Areca nut is a major crop in Dakshin Kannada and Udupi region of Karnataka. The areca nuts fall to the ground during the harvesting procedure. They are manually harvested. For small harvesters they collect it themselves. Hence, they must bend every time to pick up a seed. This leads pain in various parts of the body. They will hire laborers in the case of huge fields. As a result, a considerable amount of money should be handed to them as a fee. Nowadays, labor availability is also a major concern. The compact seed collecting machine may provide a comprehensive solution to these problems. Workers are no longer required to bend many times. Because it is portable, it may be carried to several parts of the field. It does not require electricity to operate because it is powered by a petrol engine. It is much less expensive than hiring laborers.
5	ME	Mr. Deepak Kumar Shetty K	4VP17ME006 4VP17ME012 4VP17ME021 4VP16ME080	Design And Fabrication Of Portable Paddy Thresher	Working Paddy is most important and extensively grown food crop in the world. It is the staple food of more than 60% of world population. Paddy threshing machine very much essential to the present world due to scarcity of labour or non availability of labour and this machine will help the paddy growers. The aim is to build portable paddy threshing machine that can be use to thresh the paddy and separate the paddy grains for



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					small farmers. The present project design and fabrication portable paddy threshing machine use to thresh the paddy and separated the paddy grains. The paddy threshing machine has a base frame made up of mild steel angular with vertical supporting frame, bearing is placed on the vertical supporting frames. The shaft mounted on vertical support frame and the two ends of shaft supported by the bearings. The threshing cylinder drum is mounted on the shaft. Torque required to rotate the threshing cylinder is derived from the motor speed. During operation an operator holds the bundle of crops against the threshing cylinder. The motor, which rotates the threshing cylinder by that of it will separate the paddy grains from the crop. After threshing, the bundle is taken away from the threshing machine and new bundle is placed against the threshing cylinder. In the present work design and fabrication paddy threshing machine to help paddy growers to thresh the paddy automatically and separate the paddy grains and these machine will be helpful to paddy growers.	
6	ME	Dr. Deepak K B	4VP12ME043 4VP12ME055 4VP12ME062 4VP12ME086	Design And Fabrication Of Pepper Separating, Cleaning And Grading Machine	Working	Processing of pepper involves different unit operation such as threshing, blanching, drying, cleaning, grading and packaging. These operations are important to ensure clean and quality product. The threshed and dried black pepper has extraneous matter like spent spikes, pin heads, stones, soil particles ...etc., mixed with it. Cleaning and grading are basic operations that enhance the value of product and help to get higher returns. Cleaning on small scale is done by winnowing and hand picking which removes some of the impurities. In this method the final product obtained still consist of some impurities and there are no proper cleaning methods available for the removal of impurities. The manual



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					method used for cleaning is time consuming and also work involves human labour. Hence to overcome the above-mentioned problems in this project, “Design and Fabrication of Pepper Separation, Cleaning and Grading Machine”, a vibratory mechanism and tray system is used which results in rich grade of pepper is collected in separate chamber and small size pepper (weightless pepper) and dust is collected in bottom tray. This project aims at reducing human labour and time involved in the traditional way of cleaning. The machine can also be used to separate varieties of agricultural products. Just one person is capable of carrying out the entire separation and cleaning operation. The estimated capacity of this machine is about 200-250 kg/hrs. for dry and wet pepper respectively with a cost of Rs 34,100/-. In a short duration of time the machine can convert large quantity of impure raw material into acceptable final products.	
7	ME	Mr. Deepak Kumar Shetty K	4VP17ME053 4VP17ME078 4VP17ME046 4VP17ME048	Design And Fabrication of Paddy Harvesting Machine Using Wiper Motor	Working	Recently there has been shortage of skilled labour available for agriculture purpose. Because of this shortage the farmers have transitioned to using harvesters. Cutting crops manually using labour is very time lengthy & time consuming task. The harvesters are available for purchase, but because of their high costs, they are not affordable. However agricultural groups make these harvesters available for rent on hourly basis, but the small holding farm owners generally do not require the full featured combined harvesters. Hence there is a need for smaller & efficient combined harvesters, which would be more accessible and also considerably cheaper. The mission is to create a portable user friendly and low cost mini paddy harvesting machine. The idea is to create a machine which is cheap and will reduce the labour required to harvest crops This machine targets the small



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					scale farmers who have land area of less than 2 acres. This machine is compact and can cut up to two rows of soybean plant. It has cutting blades which cut the crop in a scissoring type of motion. It runs on two stroke petrol engine of 3HP, this power from engine, is provided through pulley and gear box arrangement to the cutter. A collecting mechanism is provided for the collection of crops to one side after cutting. This mechanism is also powered by pulley arrangement. This compact harvester is manufactured using locally available spare parts and thus, it is easily maintainable. This harvester might be the solution to the problems faced by a small scale farmer regarding cost and labour implementation. After testing this machine in farm it is found that the cost of harvesting using this harvester is considerably less as compare to manual harvesting.	
8	ME	Mr. Harish S R	4VP17ME071 4VP17ME077 4VP18ME411 4VP18ME417	Design and Fabrication of Cocoa Bean Separation Machine	Working	India is an agriculture-based country and agriculture employs more than 50% of our country's population, hence agriculture is one of the main sources of income for our country. The main objective of this project is to help the small-scale farmers exclusively working in the field of cocoa cultivation. As the farmers lack the advanced machines to process their cultivated cocoa fruit. Our project "design and fabrication of portable Cocoa bean separating machine" can greatly enhance the processing capabilities of cocoa fruits and promises the safety of farmers rather than outdated methods used for processing. This machine is simple in construction and compact, it can be manufactured from the parts which are effortlessly available. This machine is cost effective as the labour cost is almost reduced. This machine is highly productive and specifically designed to reduce the time taken for separation of cocoa beans as compared to

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					traditional method. This machine can be owned by a group of cocoa farmers who can bear the low maintenance cost of this machine
9	ME	Mr.Sudarshan ML	4VP17ME008 4VP17ME002 4VP17ME036 4VP18ME408	Design and Development of Seed Sowing Machine	Working In this world of depleting resources, renewable energy plays an important role. The role of renewable energy in tomorrow's world is of great significance for the global environmental stability. Sun, wind and flowing or stored hydro are considered the most common renewable energy sources for power generation. Out of these three renewable energy resources, the advantage of hydro energy is that it can continuously supply energy and can serve as a base power. Hydro energy is one of the major renewable energy sources. The water wheels were developed in the early ages for the power production, due to their large diameter and small contact area they failed in utilizing water sources effectively, therefore water wheels were less efficient. Conveyor type turbine is designed to extract energy from flowing water. The kinetic energy available in the flowing water is made use to create the impulse action on turbine blades. To extract more energy, turbine blades will be in contact with the flowing water for more time, the mechanical energy is converted into electrical energy. Test conducted for a channel of water with velocity of 1.25 m/s gives an output of 285 watts.
10	ME	Dr. Manujesh B J	4VP17ME004 4VP17ME009 4VP17ME019 4VP17ME038	Design and Development of Packaging Substrate for Electronic Gadgets	Working Packaging is the wrapping material around a consumer item that serves to contain, identify, describe, protect, display, promote and make the product marketable and keeps it clean. Most commonly used packaging materials are plastic, corrugated boxes, metal, wood etc. All these materials are expected to harm our mother earth in their own way. So we have to reduce the usage of these materials and replace it



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					<p>with non-polluting biodegradable materials. The electronic packaging market was valued at USD 1020.13 million in 2020, and is expected to reach USD 2825.42 million by 2026, at a CAGR of 18.51% over the forecast period (2021-2026). Consumer electronics segment is the largest sector of the market studied, due to the rising demand for products, such as TVs, set-top boxes, MP3 players, digital cameras, and the processes are generally more suited for mass production. Moreover, many devices used in the healthcare sector depends on semiconductor manufacturing technology, which, in turn, is expected to impact the electronic packaging market. But non-biodegradable packaging results in a significant part of municipal solid waste and has caused increasing environmental concerns, resulting in a strengthening of various regulations aimed at reducing the amounts generated. Among other materials, a wide range of oil-based polymers is currently used in packaging applications. These are virtually all non-biodegradable, and some are difficult to recycle or reuse due to being complex composites having varying levels of contamination. In order to overcome these issues of packaging we are developing a new composite material derived from agricultural waste generated after harvesting the crops which would be a great support for farmers along with the reduction in pollution. In this project we are developing a composite material out of fibers extracted from banana stem and using gauze (a thin, translucent fabric with a loose open weave). The expansion in these bio-based materials has several potential benefits for greenhouse gas balances and other environmental impacts over whole life cycles and in the use of renewable, rather than finite resources. It is intended that use of biodegradable</p>
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					materials will contribute to sustainability and reduction in the environmental impact associated with disposal of petroleum oil-based polymers. Biodegradable packaging materials are most suitable for single-use disposable applications where the post-consumer waste can be locally composted.	
11	ME	Mr. Sunil B Lakkundi	4VP17ME003 4VP17ME031 4VP17ME039 4VP17ME041	Design and Development of Multi Stage Water Wheel to Extract Energy from Flowing Water	Working	In this world of depleting resources, renewable energy plays an important role. The role of renewable energy in tomorrow's world is of great significance for the global environmental stability. Sun, wind and flowing or stored hydro are considered the most common renewable energy sources for power generation. Out of these three renewable energy resources, the advantage of hydro energy is that it can continuously supply energy and can serve as a base power. Hydro energy is one of the major renewable energy sources. The water wheels were developed in the early ages for the power production, due to their large diameter and small contact area they failed in utilizing water sources effectively, therefore water wheels were less efficient. Multistage type turbine is designed to extract energy from flowing water. The kinetic energy available in the flowing water is made use to create the impulse action on turbine blades. To extract more energy, turbine blades will be in contact with the flowing water for more time, the mechanical energy is converted into electrical energy. Test conducted for a channel of water with velocity of 1.5 m/s may give an output of 500 watt.
12	ME	Mr. Sunil B Lakkundi	4VP17ME051 4VP17ME056 4VP17ME040 4VP17ME047	Design and Development of High Speed and High Torque Turbine	Working	In this world of depleting resources, renewable energy plays an important role. The role of renewable energy in tomorrow's world is of great significance for the global environmental stability. Sun, wind and flowing or stored hydro are considered the most common renewable energy



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					sources for power generation. Out of these three renewable energy resources, the advantage of hydro energy is that it can continuously supply energy and can serve as a base power. Hydro energy is one of the major renewable energy sources. The water wheels were developed in the early ages for the power production, due to their large diameter and small contact area they failed in utilizing water sources effectively, therefore water wheels were less efficient. Multistage type turbine is designed to extract energy from flowing water. The kinetic energy available in the flowing water is made use to create the impulse action on turbine blades. To extract more energy, turbine blades will be in contact with the flowing water for more time, the mechanical energy is converted into electrical energy. Test conducted for a channel of water with velocity of 1 m/s gives an output of 500 watt.	
13	ME	Mr. Satheesha Kumar K	4VP17ME055 4VP17ME061 4VP17ME066 4VP18ME415	Extraction of Distilled Water Using Solar Still With Fresnel Lens	Working	A Fresnel lens is much more efficient at collecting and directing the light rays by producing a beam five times more powerful than the reflector system used earlier. A solar water heater and solar desalination were one of the device used to utilize the abundant solar energy by many researchers. There are many different designs used for production of fresh water but most of them were at the experimental level. This project presents a new design of Fresnel lens based solar water heater cum desalination system .The main objective of this project is to efficient production of fresh drinking water and identification of absorber performances on the production of fresh water. In this project the use of a point Fresnel lens to concentrate the solar energy on a special designed copper absorber with fin and without fin for the production of vapour and then it is condensed to form fresh water. The proper focusing of solar intensity on special designed



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					absorber is achieved with the help of tracking mechanism. In this project, experiments are carried out by different water samples. The results for solar water heater cum desalination system by Fresnel lens showed that yield of fresh water depends on water flow rate and pressure inside the system. At the end of the experimentation period yield of fresh water was from 2-5liters/hour on bright sunny day. From experimental results showed that by providing proper orientation of the absorber and absorber with fin can achieve maximum yield. The fresh water production can be enhanced by decreasing pressure inside the system.
14	ME	Mr. Deepak Kumar Shetty	4VP18ME401 4VP18ME402 4VP18ME406 4VP18ME416	Engine Operated Mixer Grinder	Working Mixer grinder is widely used all around the world for the purpose of grinding and also for making fruit juices. The main objective of this project is to help the small-scale vendors. Our project "Engine operated mixer grinder" can greatly enhance the processing capabilities of making fruit juice and promises the safety of vendors. This machine is simple in construction, it can be manufactured from the parts which are effortlessly available. This machine is highly productive and specifically designed to reduce the time taken for preparation of juice and powdering process as compared to electrical method. This machine can be owned by a street side fruit juice vendors who can bear the low maintenance cost of this machine. Powdered food grains are a base of almost all foods in India. In ancient times, food grains are ground with the help of hand grain crushers. Today the electric motor driven grinders are used. But today there is a huge scarcity of electricity almost everywhere in India which results in six to twelve hours load shedding. In rural areas the load shedding is done daily from ten to twelve hours which badly affects their daily needs requiring electricity such as



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					food grain crushing, water supply etc. To overcome this, we can replace the electric driven process units by engine driven process units such as Grinders driven by Gearless Transmission.
15	ME	Mr. Naveen S P	4VP15ME013 4VP17ME043 4VP17ME063	Dryer for Multiple Crop Using Sliding Tray System	Working Areca nut is one of the commercial crop in India. Areca nut more commonly known as Betel Nut is a very important crop in India. It takes approximately five years for an areca nut palm to mature and bear fruit. Each areca palm is harvested once a year. The cultivation of areca nut can be traced back to Vedic periods. Areca nut was even used in Ayurvedic and Ethane veterinary medicines. It is commercially available in dried, cured, and fresh forms. This project work emphasizes on developing an areca nut dryer unit. It commercially available in dried, cured, fresh forms and one of main problem in areca nut field, is drying areca nut. So usually it required 60-65 days to dry areca nut and while drying areca nut there are many other problems like labor, raining and moisture. So taking this all consideration into action, we have designed Dryer for Multiple Crop using Sliding Tray System which close the shelter Automatically or Manually and hence reduce the human effort. And also it reduces the number of days of drying
16	ME	Mr. Sunil B Lakkundi	4VP18ME403 4VP17ME010 4VP17ME030 4VP16ME045	Design and Fabrication of Compact Solar Water Heater with Fin Type Absorber	Working In today's world hot water is used for different purposes like house hold applications. In order to attain those purposes people are following different ways like heating by firewood, electric power and also using solar energy. The actual problem is the efficiency of solar water heaters which is depend upon collector and storage tank design and weather conditions. also most of solar water heaters are required to place in a permanent location and non portable because of its huge weight and most of conventional solar water heater are

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					build to receive solar power from only in one direction which affects the heating efficiency of solar water heater. also the conventional water heater requires more space and it is expensive in market which is not feasible to the person who is staying in congested places Here compact water heater which helps the operation with latest method which fulfill the market requirement, problem and transportation of the machine is manageable which gives the proper cost effectiveness. The compact water heater which receives the solar energy from 360o , so it helps to keep the water warm for long time and it is portable, so a single person can easily handle it. and the hexagonal shaped tank which is unique in design helps to attain the solar energy from all directions. The glasses which are used for reflect the light rays to water tank are highly efficient and cheap comparing to metallic reflectors.	
17	ME	Mr. Ajith K	4VP17ME001 4VP17ME011 4VP17ME014 4VP17ME015	Design and Fabrication of Solar Arecanut Dryer with Automatic Rain and Moisture Detector	Working	Areca nut is one of the commercial crop in India. Areca nut more commonly known as Betel Nut is a very important crop in India. It takes approximately five years for an areca nut palm to mature and bear fruit. Each areca palm is harvested once a year. The cultivation of areca nut can be traced back to Vedic periods. Areca nut was even used in Ayurvedic and Ethane veterinary medicines. It is commercially available in dried, cured, and fresh forms. This project work emphasizes on developing an areca nut dryer unit. The machine is able to detect rain and moisture. It commercially available in dried, cured, fresh forms and one of main problem in areca nut field, is drying areca nut. So usually it required 60-65 days to dry areca nut and while drying areca nut there are many other problem like labour, raining and moisture. So taking this all consideration into action, we have designed a solar



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					areca nut dryer with tram system. And also it reduces the number of days of drying. The cultivation of arecanut is mostly confined to 28° north and south of the equator. It grows well within the temperature range of 14°C and 36°C and is adversely affected by Temperature below 10°C and above 40°C. Extremes of temperature and wide diurnal Variations are not conducive for the healthy growth of the palms. Arecanut can be grown in areas receiving annual rainfall of 750 mm in Maidan parts of Karnataka to 4,500 mm in Malnad areas of Karnataka.	
18	ME	Mr. Ajith K	4VP16ME024 4VP16ME052 4VP16ME053 4VP16ME057	Design and Fabrication of Raw Coconut Scraping Machine with Vegetable Cutter	Working	We all know that coconut is one of the major crop India and all parts of the world. It has the several type since tender coconut raw coconut and dry coconut and we considered the processing of raw coconut. In Indian style of cooking raw coconut is highly used but the processing time of the scraping of raw coconut takes more time and with less concern of safety. So there is a need of machine which enhances better safety and saves processing time. Raw coconut is also a wet coconut which is not only used for cooking but also used in sweet industries In another side processing of different vegetables that is cutting, slicing and scraping is considered very important in any of food department. So in order to save the time and ensure better safety, there is a demand in vegetable processing too. A machine is developed by combining, these two that is scraping of raw coconut and vegetable processing. A 1HP motor 3 phase is used with an rpm of 1440. The power transmissions are through belt and pulley. At a time, all the shaft run at same torque with same rpm. The man can scrap raw coconut at a time with 2 tools and backside of machine vegetable is processed by using different tools. These



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					processed vegetables and raw coconut collected in tray.
19	ME	Mr. Sunil B Lakkundi	4VP17ME045 4VP17ME050 4VP17ME079 4VP18ME409	Portable Rail Trolley	Working As we know most of India's population depends on Agriculture. And Farmer is the backbone of our country. In our area areca nut, coconut is the major crop. One of the major problems associated with agriculture is the lack of labors. Due to this many young farmers are will quit farming and migrate to cities. During harvesting of areca nut, areca nut is to be transported from plantation to the place of storage. Since lack of labors, farmers will be facing difficulties. Many trolleys are available in market, but those trolley will not satisfy the requirements of the farmers. Devices like hand trolleys (single or double wheel trolley) square measure used to relieve the stress of lifting but induces stress on the person. However, these devices sometimes fail due to the overweight of load and person unable to pull or push. Keeping this problem in mind, the project tries to design a stair rising rail trolley which may carry objects (up to 150kg) with less effort compared to carrying them manually by hand and other carts. This trolley system will help in working efficiently and with economic way. This setup will help both farmers and labors in their work. This method will increase the rate of work due to its user-friendly performance.
20	ME	Mr. Satheesha Kumar K	4VP17ME016 4VP17ME033 4VP18ME407 4VP18ME414	Optimization of Vertical Axis Wind Turbine	Working In this world of depleting resources, renewable energy plays an important role. The role of renewable energy in tomorrow's world is of great significance for global environmental stability. Wind, sun and flowing or stored hydro are considered the most common renewable energy sources for power generation. Wind energy outshines all other renewable energy resources due to the recent



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					<p>technological improvements. Electrical energy generation from wind power has increased rapidly and due to the increased interest, many studies on efficient wind turbine design have been proposed. This unique design allows using Savonius as a method of self-starting the wind turbine which the Darrieus cannot achieve on its own. Rooftops and highways can provide a considerable amount of wind to drive a turbine. This energy is unused. Extensive research on the wind patterns is required to determine the average velocity of the wind and thus using all the collected data, the wind turbine has to be designed. In the present study, an attempt is made to design and fabricate a vertical axis wind turbine that can utilize low-velocity wind for the useful generation of electricity sufficient for highway lighting and domestic purpose. Based on the result, the vertical axis wind turbine suitable for the small capacity power source for a room.</p>	
21	ME	Dr. Deepak K B	4VP17ME035 4VP17ME013 4VP17ME032 4VP18ME413	Fabrication of Compost Mixing And Dispensing Machine	Working	<p>In recent years, labour scarcity has emerged as one of the foremost challenges in farming. One of the crop that has been most affected by this is the arecanut. It is important to provide a plant with necessary minerals/compost and labourers are required to carry out this process as the weight of the compost is heavy and the arecanut fields are usually large. This project is a combination of a hand cart, compost blending machine and compost dispensing machine. These all are powered by a 160 cc Honda engine. The compost is poured inside the mixing chamber and mixing is done inside, blending of compost is completed. The cart is portable and is driven by an engine. Dispensing is achieved with the help of conveyor setup.</p>



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22	ME	Dr. Deepak K B	4VP17ME054 4VP17ME064 4VP18ME410	Fabrication of Multipurpose Agrowaste Shredder	Working	<p>Agriculture is considered as the back bone of our country. More than 80% of population in our country are directly or indirectly rely on agriculture sector. But the economy of agricultural province is predominantly hindered, due to lack of technological assistance and innovations. Agrowaste management is the one such territory where the agricultural sector is encountering a bunch of obstacles. This project multipurpose agrowaste shredder aims at resolving complications involved in the agrowaste management. Shredding makes the transmogrification of larger sized bulk agrowaste to smaller sized particles proportionally assists to rapid degradation of agrowaste. Traditional shredding is time absorbing and laborious. So the destination of this project is to automate the process of shredding, with compactness and simplification in the process. Thus in this project work, a machine for the shredding of numerous agrowastes (i.e. areca leaves, coconut leaves, wooden branches etc.) has been fabricated. The machine consists of an approximately rectangular cross section having metallic outskirts. This machine will be driven by 2HP electrical motor. Power and motion transmission takes place within the components using gears and pulleys. When the agrowaste is fed through the inlet, the grabbing blade sucks it towards the rotary blades. By impact and shearing action, rotating cutting blades will transform the macro agrowaste into micro particles, which can be used in diverse applications. The output produced from this machine is about 40-45 kg/hr, which is ten times higher than that of the traditional shredding. Large output production in a smaller interval of time, reduced man power with augmented accuracy are the highlights of this machine.</p>
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23	ME	Mr. Sudarshan M L	4VP17ME017 4VP17ME025 4VP17ME005 4VP17ME037	Fabrication of Low Cost Milk Packing Machine	Working	Many smallscale milk production business owners and small and medium scale owners do the process of weighing and packaging their product manually. Small and Medium scale food production business owners who particularly produce items like 'Chiwda', etc has to do the weighing, filling and packaging process manually. The sealing process is carried out with the help of candles. This process is very time and effort consuming and thus it limits their production as well as their business. It is observed that the cheapest machine which would automate this process of weighing and packaging costs around Rs.1.25 lakhs [21] and it is manufactured by 'All pack Engineers'. Automatic Weighing and Packaging which is priced at the rate mentioned is not affordable for small scale and medium scale businesses. This project aims to develop such a machine which automatically weighs and packs the food with the help of microcontroller and sensors. The idea is to manually place the bag, then automatic weighing, filling and packaging is done. The purpose of doing this project is to reduce human efforts and time consumption. Decreasing machine cost is the major advantage of project. The machine design is based on simple mechanisms and it can be installed easily. The speed of packaging is increased thus resulting in more production and business. It will eradicate the traditional packing and sealing method. This process will reduce the number of paid workers.
24	ME	Mr. Sudarshan M L	4VP18ME405 4VP17ME026 4VP17ME020 4VP17ME018	Fabrication of Automatic Weighing and Packing Machine of Glocery Food Items	Working	Many smallscale food production business owners and small and medium scale Grocery Store owners do the process of weighing and packaging their product manually. Small and Medium scale food production business owners who particularly produce items like 'Chiwda', etc has to do the



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25	ME	Mr. Naveen S P	4VP17ME073 4VP17ME062 4VP17ME049 4VP17ME080	Solar Battery Powered Water Purification System	Working	Pure, clean and safe drinking water isn't available easily these days. Growing population, industrial development and environmental degradation are all causes for this. In present work we have developed a water purifier which works on solar energy. The basic principle behind this project is filtration and Ultra Violet (UV) radiation treatment and Reverse Osmosis (RO) process. The solar radiations are collected by solar Photovoltaic (PV) panel and converted into electrical power. This energy is then stored in a battery. The battery is connected to the purification unit and PV



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					panel through a charge controller. The purification unit consists of pre-filter, UV, RO and pumps. The pumps create necessary pressure required to carry out filtration. The sensor has been used to monitor the level of water in the water tank and prevents it from over flow. The purification system has a capacity of producing 40 lt/hr purified water and is suitable for remote area without power supply. Purification system can be improved by providing the Mineral Charging and can be scaled up to higher capacity for commercial use.
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