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SNo	Dept	Guide	USNs	Title	Status	Abstract (100 words)
1	ME	BHASKAR KULKARNI.	4VP16ME417 4VP15ME025 4VP16ME413 4VP15ME104	DESIGN AND FABRICATION OF JOWAR AND MULTIPURPOSE CUTTING MACHINE.	Working	<p>With the help of four wheel steering (4WS) system all the four wheels can be turned to any direction using the steering. Thus the vehicle can be controlled more effectively especially during cornering and parking. Also the speed of the vehicle can be increased or decreased.</p> <p>There are three types of production of four-wheel steering systems:</p> <ol style="list-style-type: none"> 1. Mechanical 4WS 2. Hydraulic 4WS 3. Electro/hydraulic 4WS <p>The mechanical 4WS uses two separate steering gears to control the front and rear wheels. The hydraulic 4WS uses a two-way hydraulic cylinder to turn both the wheels in the same direction. It is not possible to turn them in the opposite direction. The electro/hydraulic 4WS combine computer electronic controls with hydraulics to make the system sensitive to both steering angle and road speeds</p> <p>This system finds application in off-highway vehicles such as fork lifts, agricultural and construction equipment and mining machinery. It is also useful in passenger cars, mainly SUVs. Four-wheel steering, 4WS, also called rear-wheel steering or all-wheel steering, provides a means to</p>

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					actively steer the rear wheels during turning maneuvers. It should not be confused with four-wheel drive in which all four wheels of a vehicle are powered. It improves handling and help the vehicle make tighter turns.
2	ME	DR.DEEPAK K B	4VP15ME029 4VP15ME033 4VP15ME035 4VP15ME019	DESIGN AND FABRICATION OF MOTORIZED DRIED ARECA NUT COLLECTING AND BAGGING MACHINE	Working Arecanut is one of the major plantation crops in India which is grown with an annual production of 4,15,000 tons per year. It is largely grown in the states of Karnataka and Kerala. Depending upon the consumption requirement, areca nut is harvested either at a tender stage or when the nuts are fully ripened. Fully ripped areca nut is harvested in the months starting from November to February and sun dried for about 40 days by evenly spreading them in a single layer on level ground. Areca nut cultivation is long process involving harvesting, separating the nut, moving the arecanut to ground for drying, separating the nut, bagging, de-husking etc. Several machines are being developed to help farmer, but machines for collecting the areca nut from ground after drying have not been developed. Collecting the areca nut from ground is a tedious, painful and time consuming process. Areca nut collecting and bagging machine is a solution for this problem. The machine is intended to collect areca nuts from ground directly to gunny bags. fixed in exit provided at top end of screw conveyor. After the bag is filled, it is removed from the exit to move the bags to store rooms. The machine requires one person to operate it, so that farmer himself can use it.



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3	ME	SATHEESHA KUMAR K	4VP15ME006 4VP15ME003 4VP15ME042 4VP15ME048	PERFORMANCE STUDY ON BELT TYPE OIL SKIMMER	Working	<p>During the recent years, World has witnessed many oil spillage tragedies in the oceans and made negative effect on the environment. Apart from this, sometimes Oil is getting spillage as the result of chronic and careless which is used in the oil industries on oil products. It is estimated nearly 706 million gallons of waste oil enters into the ocean every year; and more than half is from land drainage and waste disposal. This made ever lasting damage to aquatic life. In order to separate the oil from oil water mixture, various type of oil skimmers are used in the industries. The intension of this project is to design and conduct a performance study on belt type oil skimmer. The belt skims the oil from water which can be wiped out, and which is collected in the tank. The collected oil can be reused for many purposes. In these kinds of skimmers different types of belts are used. Performance and efficiency of this systems mainly depends on the type of belt, belt material and speed of belt play a major role. So it is important to study and analyze the performance of various types of belts in order to select proper belt for better performance. The outcome of this project is to identify the suitable belt material and optimum speed of motor. belt on which oil is collected and easy removal of tramp oils from coolant tanks, service stations, wash tanks etc.</p>
4	ME	AJITH MOHAN K	4VP15ME071 4VP15ME028 4VP15ME065 4VP15ME092	AUTOMATED TILES CUTTING MACHINE	Working	<p>This project is on the design and fabrication of an automatic hacksaw machine for cutting metal of different size and length with the help of hacksaw blade. The objective of this project is to save man power and time in cutting metals in order to achieve high productivity. The power to the hacksaw is provided by the motor. Power is</p>

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					transferred from motor to shaft through a chain drive and the other end of shaft is coupled to a Link. This link is connected to the crank which in turn is connected to the Hacksaw blade. Rotary motion of the shaft is converted into reciprocating motion of the hacksaw blade with the help of Link and crank. Work piece of desired length can be cut by feeding it to hacksaw blade by holding it in a bench vice. The various component of the machine were designed and fabricated. Test was carried out on the machine for different metals by using chain and belt transmission elements. compared and it was concluded chain drive is more efficient belt drive. hacksaw blade by holding it in a bench vice. The various component of the machine were designed and fabricated. Test was carried out on the machine for different metals by using chain and belt transmission elements. It is more efficient belt drive.
5	ME	VRIJESH RAI	4VP15ME038 4VP15ME002 4VP16ME414 4VP14ME045	COMPACT PEPPER SEPARATOR	Working Agriculture is the backbone of India's economy. Application of technological innovation to improve the productivity in agricultural activities is a continuous process. Nowadays, agriculture related engineering projects have gained a lot of scope because of the need and usefulness in uplifting the quality of work. Pepper separator machine is an agriculture related project for facilitating efficient separation of pepper berries from its spikes. There are many problems associated with existing design of pepper separator machine like high cost, low efficiency, low capacity and more processing time. One of the main disadvantages of the existing machines is that they damage the berries because of the use of metallic parts in them. To address this problem an attempt was made to replace some of the conventional metallic parts by



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						a new design and automate the separation of pepper.
6	ME	SUDARSHAN M L	4VP14ME081 4VP15ME001 4VP14ME005 4VP15ME021	DESIGN AND FABRICATION OF DOUBLE BARRELLED PLASTIC RECYCLING MACHINE AND MANUFACTURING OF UTILITY PRODUCTS	Working	Plastics are inexpensive, lightweight and durable materials, which can readily be moulded into a variety of products that find use in a wide range of applications. As a consequence, the production of plastics has increased markedly over the last 60 years. However, current levels of their usage and disposal generate several environmental problems. Around 4 per cent of world oil and gas production, a non-renewable resource, is used as feedstock for plastics and a further 3–4% is expended to provide energy for their manufacture. A major portion of plastic produced each year is used to make disposable items of packaging or other short-lived products that are discarded within a year of manufacture. These two observations alone indicate that our current use of plastics is not sustainable. Recycling is one of the most important actions currently available to reduce these impacts and represents one of the most dynamic areas in the plastics industry today. Recycling provides opportunities to reduce oil usage, carbon dioxide emissions and the quantities of waste requiring disposal. Here, we briefly set recycling into context against other waste reduction. This project tries to describe the reader on waste management system. It briefly explains the fundamentals of waste management system. Recycle. recycling, methods and possibilities. Here we made Plastic waste recycling machine to convert municipal plastic waste into useful product. Plastic waste recycling machine to convert municipal plastic waste into useful product. strategies, namely reduction in material use through down gauging or product reuse, the use of



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					alternative biodegradable materials and energy recovery as fuel.
7	ME	KIRAN KUMAR N A	4VP15ME011 4VP15ME027 4VP14ME001 4VP15ME103	OPTIMIZATION AND ANALYSIS OF OMNIDIRECTIONAL ROBOT WHEEL	Working Mobile robots with Omni-directional wheels can generate instant Omni-directional motion including lateral motion without any extra space for changing the direction of the body. So, they are capable of travelling in every direction under any orientation to approach their destinations even in narrow aisles or tight areas. Especially, if a construction tool is combined to the mobile robot, it can be a mobile construction robot to be able to move from one position to another. In this project the Omni-directional wheel, which is most frequently utilized in industrial fields, is selected to achieve Omni-directionality of the mobile robot. the developed Omni-directional mobile robot was conducted to confirm the feasibility for industrial purposes. .
8	ME	SUNIL B LAKKUNDI	4VP15ME089 4VP15ME075 4VP15ME072 4VP15ME085	FABRICATION OF CONVEYOR TYPE HORIZONTAL TURBINE 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 was 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



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						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. for a channel of water with velocity of 1.25 m/s gives an output of 285 watt.
9	ME	AKSHAY KUMAR	4VP15ME047 4VP15ME067 4VP15ME017 4VP15ME052	STAIRCASE CLIMBING TROLLEY	Working	Doing better work with lesser effort has been the main objective of human beings in any field. Material handling involves short distance movement of loads within the confines of a building or between a building and transportation vehicle. A trolley is a common material handling device used in large number of industry to move the physical product. Devices such as hand trolleys are used to relieve the stress of lifting while on flat ground. However, these devices usually fail when it comes to carrying the load over short fleet of stairs. This project aims at developing a mechanism for easy transportation of heavy loads over stairs with less effort compared to carrying them manually. The trolley is equipped with motorized drive system and Tri-Star wheels setup which enable it to carry load up and down the stairs and also eases the movement of trolley on irregular surfaces like holes and bumps. This mechanism can be used in buildings under construction and in workshops for material handling. It can also be used as stair climbing mechanism for wheel chair.
10	ME	SUDARSHAN M L	4VP15ME068 4VP15ME074 4VP15ME082 4VP15ME101	STUDY AND ANALYSIS OF ASH FILLED COMPOSITE FOR MAKING THERMAL INSULATING MATERIAL	Working	Composite in composite material means, two or more materials combined on a macroscopic scale to form a useful material. The advantage of composite is, they exhibit the best qualities of their constituents and also some qualities that neither constituent possesses. The

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					composite materials are known for its high strength to weight ratio and lower density which makes them best suitable for the application where weight is critical. The main disadvantage of composites are its brittleness and low fracture toughness, this can be overcome by adding suitable filler and proper reinforcement. In different composition of 0%, 5%, 10%, 15% and 20% are used to develop light weight composite. The significance of using ash as filler material in order to increase mechanical as well as thermal stability has studied by many, in our project we check the improvement of mechanical as well as thermal properties when ash is added as filler with sugarcane bagasse fiber reinforced with epoxy. Ash filled polymer composites possess attractive mechanical, thermal, electrical properties, better dimensional stability and are cost effective.
11	ME	VRIJESH RAI	4VP16ME419 4VP15ME096 4VP16ME409 4VP15ME095	DESIGN AND FABRICATION OF CASHEW NUT SEPARATOR	Working Cashew is one of the main potential fruit, in which both the fruit and cashew nut are useful. Traditional method of cashew seed separation from the cashew apple is time consuming and it requires human power. This Cashew seed separator machine is designed and fabricated to ease the work of a farmer. This project aims at reducing the human labour and time involved in the traditional way of separating the cashew nut from cashew apple in a short duration of time and the machine can convert large quantity of raw materials into acceptable final products. The machine is manufactured from locally available materials and assembled and maintained at a relatively low cost. The machine has two plates fixed one above the other. One of the flat plate is fixed and the other is movable. The movable plate is connected to the link



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						which is directly attached to the slotted lever. When the motor gets actuated the slotted lever moves which in turn provides to and fro motion. the moving blade. Knife edge provided in the bottom plates separates the cashew nut from cashew apple and the nuts are collected in the tray.
12	ME	RAKSHITH KUMAR SHETTY	4VP16ME404 4VP16ME415 4VP15ME063 4VP15ME099	DESIGN AND FABRICATION OF AGRICULTURAL PRODUCT FILLING AND PACKING MACHINE	Working	In older days a person had to weigh the product using some means like weigh balance and then fill it to a bag and then pack it. This takes lots of labour and time is the key factor in the mass production as well as in batch production. To reduce the man power in packing field & to increase the productivity this concept has been developed as any agricultural crop bagging and packing machine. Compare to other type of packing machines available in the market are costlier so we designed a machine that can perform both filling and packing operations with low cost. It consists of hopper, frame, joints, bearing etc. This machine is basically designed for packing of dehusked areca nut. Generally we can see different packing machine in market for various application. In this setup dehusked areca nut is filled using pulling the machine forward. Hooper is the container in which dehusked areca nut is placed. Then the series of bag is packed one by one using packing machine. So in this machine we can perform both bagging & packing operations simultaneously so that reduce man power used for the process also less time consumable as compare to manual processes.
13	ME	RAKSHITH KUMAR SHETTY	4VP15ME080 4VP16ME405 4VP16ME402 4VP15ME061	ANALYSIS ON MECHANICAL BEHAVIOUR OF A COMPOSITE MATERIAL BY USING	Working	Natural fiber composites are a class of materials which are currently replacing the synthetic fiber composites for practical applications. The present work describes the development and characterization of a wooden powder of

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				GLASS FIBRE.		jack fruit tree and chopped 1-glass fiber. The mechanical behavior of the composite material has been investigated. Epoxy is used as matrix material. E-glass fiber in varied proportions (0%. 5%. 10%. 15%) is used as filler. Mechanical tests like Tensile, Bending, and Impact tests were carried out for the specimen in accordance with ASTM standard .
14	ME	Dr. MANUJESH B J	4VP16ME410 4VP16ME412 4VP15ME037 4VP16ME401	DESIGN AND ANALYSIS OF GO-KART CHASSIS	Working	Go-Kart is a self-propelled vehicle which is used for motor sporting. It is a simple self-propelled, lightweight compact vehicle specifically designed and fabricated for racing. The chassis plays a very vital role in providing maneuverability during dynamic applications. Go-Kart Chassis are different from chassis of ordinary cars on the road. The chassis houses all the components of the Kart and is made of a tubular cross section with 1 inch diameter and 2 mm wall thickness. The ground clearance is low around 1" to 2" and absence of suspension systems makes chassis a critical component of Go-Kart. Thorough understanding of chassis under various working condition is very critical. The main objective is to design an all-encompassing chassis with the specifications mentioned in the SAE rulebook. The chassis is modeled in SOLID EDGE V19 and statically analyzed using ANSYS Workbench 14.5. Three different chassis were designed with change in chassis materials, viz. AISI-4130, Al-6061 and Titanium Alloy. Later chassis is analyzed for front and rear impact, taking the effect of assumed load on chassis frame due considering deflection as major attribute. This report documents the process and methodology adopted to determine equivalent stresses, maximum deformations on all the chosen chassis frames and loading conditions. Based on the Factor of Safety, the

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					best chassis is selected in order to recommend the optimized design with the ideal material which can be used for the fabrication of a safe Go-Kart.
15	ME	NAVEENA KRISHNA P V	4VP15ME031 4VP15ME007 4VP15ME012 4VP16ME407	DESIGN AND FABRICATION OF ARECANUT DE- HUSKING MACHINE	Working As we know areca is one of the major crop of India. It is not just a crop which is used for gutka, they are also used for medical purpose and in Indian culture they have major role. The major problem in arecanut processing is lack of labours. After drying the arecanut for 40 days, it can be dehusked and it is marketed. The dehusking of arecanut is done manually and because of lack in labour problem, there is a need for a dehusking machine. An average worker can dehusk about 10 kg per hour. So there is a scope to develop a dehusking machine. In market, there are number of machine. But still there is no machine with 100% working efficiency. So there is a scope for a machine with lot more efficiency. A machine is developed, using shafts with teeth rather than using blades and rubber tyres. This will not damage the areca while peeling. This also has advantage over rubber tyres because there may a chance of smaller size areca getting out of the machine without getting dehusked. We have used shaft which has tapered teeth and they are welded in an inclined position. Which helps in dehusking areca of all sizes. A 0.25 HP single phase motor is used, which transfers power to the gear box, which reduces the rpm from 1440 rpm to 28 rpm and the torque is increased. Hence one complete cycle is divided into 2 half cycles. In first half cycle, arecanut gets dehusked with the help of teeth mounted on shafts. second half cycle, the arecanut and the husk is collected separately for further use.
16	ME	Dr. DEEPAK K B	4VP15ME018 4VP15ME015	FABRICATION OF UNMANNED ROBOTIC	Working In this work a climber of triangular chassis incorporated with gear motors is used for climbing the arecanut tree. A

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			4VP15ME022 4VP15ME053	PESTICIDE SPRAYER AND HARVESTER FOR ARECANUT PLANTATION		sprayer or a harvester is mounted on the mounting base provided in the climbing unit according to the requirement. The spraying and harvesting action is controlled by a control box to obtain uniform and controlled action. All the operations are performed in an unmanned manner. This project solves all the problems regarding the climbing, spraying and harvesting of arecanut tree, thus developing a safer, reliable and an economical system. This model was made and was tested. The test was successful and based on the observations done while testing the prototype, the model has been fabricated.
17	ME	SUNIL B LAKKUNDI	4VP15ME083 4VP15ME050 4VP15ME057 4VP15ME058	FABRICATION OF POTENTIAL ENERGY BASED CONVEYOR TYPE VERTICAL TURBINE TO EXTRACT ENERGY FROM LOW HEAD HIGH DISCHARGE WATER SOURCES	Working	<p>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.</p> <p>Turbines which are used in low head sites are complicated in design, less efficient and cannot be used in ultra low head cases like less than 3 meters. It requires very high kinetic energy and pressure energy of fluid for operation. In ultra low head sites working on potential energy, own due to weight of fluid. Test conducted with three buckets each with 45 liters at height of 1.5 meter, 1.2 meter and 0.9 meter respectively gave an output of 500 watts.</p>
18	ME	Dr.SHANKAR	4VP15ME046	MODEL OF SOLAR	Working	Pure, clean and safe drinking water isn't available easily

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		GOUD N	4VP15ME077 4VP16ME421 4VP15ME023	POWERED WATER PURIFIER SYSTEM		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. 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 panel through a charge controller. The purification unit consists of pre-filter, UV 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 RO and can be scaled up to higher capacity for commercial use.
19	ME	SANTOSH KUNNUR	4VP15ME020 4VP15ME043 4VP15ME060 4VP15ME100	DESIGN & FABRICATION OF SOLAR DRYER WITH AUTOMATIC RAIN LIGHT 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



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						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. Areca nut dryer with automatic rain and moisture detector which will detect the rain and close the shelter and hence reduce the human effort. And also it reduces the number of days of drying.
20	ME	DEEPAK KUMAR SHETTY	4VP15ME064 4VP15ME024 4VP15ME034 4VP16ME400	ARECANUT BUNCH SEPERATOR	Working	Areca nut is one of the important commercial crop in India. It commercially available in dried, cured and fresh forms. When the husk of the fresh fruit is green the nut inside is soft enough to be cut with a typical knife. In the ripe fruit, the husk becomes yellow or orange, and as it dries the fruit inside hardens to a wood like consistency. Traditional method of separating the areca nut from its bunch is time consuming and farmer faces many problems like shoulder pain and fatigue. In this project an areca nut bunch separating machine was designed and fabricated to help the farmers. The project aims at reducing the human effort and time consumption by using suitable mechanism. The machine was designed by considering average requirement of the quantity of areca nut to be separated and the farmer friendly, less maintenance mechanical parts. The machine is simple in its construction having an electric motor connected to a rotor through a set of pulley and belt. The areca nut bunch is fed through a feeding mechanism to the rotor, where separation of areca nut from its bunch taken place easily. The machine helps the farmer by cutting down the labour cost and increasing the productivity.
21	ME	SUNIL L J	4VP15ME078 4VP15ME084	PERFORMANCE ANALYSIS OF CRDI ENGINE USING	Working	In this work we conducted experiments on CRDI engine to check the effect of waste plastic oil on performance and

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			4VP15ME069 4VP15ME102	PLASTIC BIOFUEL		emission. The engine we used for this work is Mahindra maxximo, 2-cylinder, 4 stroke diesel engine, the rated power of the engine is 18.4kW at 3600 RPM. The waste plastic oil obtained from pyrolysis process have properties similar to that of petro-fuels. The WPO obtained from pyrolysis can be directly used as an engine fuel. The different proportions of plastic oil-diesel blends obtained by pyrolysis has been tested for its performance and emission in a CRDI engine. For each blend the readings are taken keeping speed constant and varying load (20%, 40%, 60%, 80%). For different blends of plastic-diesel the performance and emission parameter varies. The brake thermal efficiency of the P30D70 blend is found nearly the same as that of diesel (D100) up to 80% load. The brake specific fuel consumption of the same blend is less compared to other blends. The NOx, CO, HC and smoke emissions are higher in case of blends. Thus, the oil produced can be used after fractionation or some suitable modification in the engine design and engine conditions.
22	ME	DEEPAK KUMAR SHETTY	4VP15ME059 4VP15ME081 4VP15ME086 4VP15ME090	DESIGN AND DYNAMIC ANALYSIS OF AN ATV ROLL CAGE	Working	All-Terrain Vehicle is the vehicle which is used for terrain applications. There will be a chance of threat to driver life, damage to the vehicle parts and the roll cage members can be deformed permanently. The members should be replaced when permanent deformation takes place. This rework on the roll cage leads to decrease in the strength of roll cage. In All Terrain Vehicle weight of the vehicle is an important parameter. Excess weight leads to poor acceleration, ineffective breaking, poor suspension effect and overall performance of vehicle. Our aim in this project is to achieve driver safety by choosing appropriate material for roll cage by comparing different roll cage



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					materials available in the market. Using aluminum alloy we can reduce weight of the roll cage and overall performance of All Terrain Vehicle. In steel alloys by using appropriate tube dimensions and effective design, we can decrease the weight of the roll cage, increase strength and overall performance of vehicle.
23	ME	VIJAY PATIL	4VP15ME056 4VP14ME125 4VP15ME091 4VP15ME098	SOLAR GRASS CUTTING MACHINE BY USING ROCKER BOGIE MECHANISM	Working Suspension is divided into non-independent suspension and independent suspension. These two kinds of suspensions are widely used in general vehicles. General vehicles can travel on urban roads and highways. But they cannot travel on rough roads or extremely uneven roads. The rocker-bogie suspension is proposed to solve that problem. Automated solar grass cutter is an automated grass cutting robotic vehicle powered by solar energy that also avoids obstacles and is capable of moving in ups and downs. We also use a solar panel to charge the battery so that there is no need of charging it externally. Manual effort is completely deducted. The proposed system design eliminates the human efforts in grass cutting field such as lawn. The solar grass cutting machine is a robotic vehicle powered by solar energy that also avoids obstacles. The proposed system design eliminates the human efforts in grass cutting field such as lawn. The solar grass cutting machine is a robotic vehicle powered by solar energy that also avoids obstacles and is capable of automated and manual grass cutting. The system uses 12 volt battery to power the vehicle movement motor as well as the grass cutter motor. A solar panel is used to charge the battery so that there is no need of charging it externally. The movement of machine is totally controlled by automatic mode and manual mode. 'Bluetooth controller 'play store application runs this machine movement and direction

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					through an android application. The main target of this machine is to reduce human efforts.	
24	ME	SANTOSH KUNNUR	4VP15ME039 4VP15ME094 4VP16ME408 4VP16ME406	IMPROVEMENT OF DESIGN AND FABRICATION OF FLEXIBLE PESTICIDE SPRAYING MACHINE	Working	To mechanization of agriculture in India some equipment has been developed. The pesticide sprayer is one among them and it is done by traditional farm workers by carrying backpack type sprayer, which requires human effort or by using electric pump. To improve the agriculture system and to reduce the human effort and problems associated with the backpack sprayer new equipment is fabricated which will be beneficial to farmers. The equipment utilize renewable energy source (Solar energy) which is eco-friendly to function. The solar panel gives out electric supply to system, Also minimize the wastage of pesticide and time. Our contribution on our project is by using eco-friendly reliably available solar energy as a main source of energy making this device by advancing the spraying methods which make friendly to use and operate which can be useable in different spraying stages of farming as per process requirement. It can be operated in small farming land with the standard spacing decreasing the labour cost and human effort .
25	ME	MR.HARISH S R	4VP15ME026 4VP16ME420 4VP15ME005	PRODUCTIVITY IMPROVEMENT THROUGH IMPLEMENTATION OF "5 S" IN A SSI	Working	Small-Scale enterprise (SSI) assumes an essential part in Indian monetary system. 5S has the effective devices of Lean production to enhance the productiveness in small scale businesses. It is a tool for cleaning, sorting, organizing and providing the necessary groundwork for workplace improvement. It may be combined with other tools such as Kanban, Kaizen, Total Preventive Maintenance and Total Quality Management as per the requirement. This project is an application of "5S" for productivity improvement in a small scale industry, named

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					“Speciality Graphites”, a manufacturer of graphite rings and gaskets. Most of the small scale industries are unaware about the 5S tools. The main aim of this project work is to implement the concept of ‘5S’ to enhance the productivity, safety, efficiency through effective work space management.
26	ME	MR.BHASKAR KULKARNI	4VP15ME097 4VP14ME118 4VP14ME115 4VP14ME050	UTILIZATION OF SOLAR ENERGY USING SOLAR PARABOLIC DISH BY USING FIN TYPE ABSORBER	Working This project work deals with the design and fabrication of Dual Axis Manual Tracking Solar Parabolic Dish Concentrator to generate hot air for domestic applications like crop drying, laundry, space heating, cloth ironing and other applications. The hot air generated in Solar Parabolic Concentrator is transferred to the dryer for improving the dryer performance. With this setup experiments conducted and results shows that drying process take place at a faster rate as compared to normal dryer. This way, the dryer performance is improved and hence reduced the dependency on traditional method for domestic applications.
27	ME	PUNEETH N	4VP15ME041 4VP15ME032 4VP15ME093 4VP15ME076	PREPARATION AND CHARACTERIZATION OF PHYSICAL AND MECHANICAL PROPERTY OF JUTE FIBERS PARTICLE REINFORCED POLYMER COMPOSITE.	Working Now-a-days, the natural fibres from renewable natural resources offer the potential to act as a reinforcing material for polymer composites alternative to the use of glass, carbon and other man-made fibres. Among various fibres, jute is most widely used natural fibre due to its advantages like easy availability, low density, low production cost and satisfactory mechanical properties. For a composite material, its mechanical behaviour depends on many factors such as fibre content, orientation, types, length etc. Attempts have been made in this research work to study the effect of fibre loading on the physical, mechanical and water absorption behaviour of jute fibre reinforced epoxy. Composites of various

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					compositions with two different fibre loading (30wt%, 40wt%) fabricated using hand lay-up technique.
28	ME	VIJAY M PATIL	4VP15ME070 4VP15ME055 4VP15ME036 4VP15ME066	DESIGN AND ANALYSIS OF HYBRID WIND TURBINE	Working In today's technology driven world electricity is one of the foremost thing for our day to day life activities. As we all are oblivious of the fact that the renewable sources of energy are depleting at a lightning fast rate. So it's time for us to shift the focus from conventional to non-conventional sources of energy to produce electricity. Renewable sources do not have any detrimental effect on the environment. Solar-wind hybrid system is basically an integration of solar plant and a wind energy plant. It will help in providing the uninterrupted power supply. The aim of this project is to design a hybrid wind and solar energy supply system for a high way street lights and house hold purposes in order to satisfy its energy requirements. The energy generated from solar and wind is much less than the production by fossil fuels, however, electricity generation by utilizing PV cells and wind turbine increased rapidly in recent years. This project presents the Solar-Wind hybrid Power system that harnesses the renewable energies in Sun and Wind to generate electricity.