



Aditya College of Engineering & Technology

Aditya Nagar, ADB Road, Surampalem – 533437

Department of Mechanical Engineering

Academic Year: 2020-2021

Project Title:	Design of Portable Electric Power Tiller Machine	
Guide Name:	B. JAGADISH	
Students Name with Roll No.:	18P35A0334	GUNDUBILLI SAI
	17P31A0330	RELANGI KALYAN
	18P35A0362	NULUKURTHI JAGADEESH
	17P31A0352	KAMIREDDY VINAY DATTA
	17P31A0351	JIDDU VEERA VENKATA SRINIVASU

the human effort, at a very negligible price using motorized tilling mechanism. The electric power tiller helps reduce the time and cost involved in tilling using a smart portable design thereby increasing the productivity and efficiency in agriculture		
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Abstract	PO's Mapping	PSO's Mapping
<p>In this work, Agriculture has been an integral part of the human ecosystem. However, traditional farming methods require a lot of human effort and are very time-consuming. Farm tilling is one of the most labour intensive operations in agriculture. Manual tilling of fields is very strenuous task while tractors incur high capital along with heavy fuel consumption costs.</p> <p>This low-cost portable battery charged electric power tiller machine is a one-stop modern solution to enhance the conventional agriculture methods of farming, as it reduces</p>	<p>PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO10, PO11, PO12</p>	<p>PSO1, PSO2, PSO3</p>

PO1: Engineering Knowledge	PO5: Modern Tool usage	PO9: Individual & Team Work
PO2: Problem Analysis	PO6: Engineer & Society	PO10: Communication Skills
PO3: Design & Development of solutions	PO7: Environment & Sustainability	PO11: Project Management & Finance
PO4: Investigations on complex problems	PO8: Ethics	PO12: Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	PSO2: The ability to work in manufacturing and other sectors' operations and maintenance plants	PSO3: As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises



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Relevance to PO's and PSO's

PO1	Applied the subject knowledge in calculation for design
PO2	Studied and analysed the working of electric power tiller
PO3	Designed the portable electric tiller for
PO4	Power and torque required to run the rotor blades had calculated
PO5	Solid works software is used for designing and simulation
PO6	Portable electric tiller is designed to work with low power
PO9	Fabrication of the tiller is done by the team collaboration
PO10	Ideas were shared in between team members
PO11	Business plan contains the work flow and cost control
PSO1	Design and development of complete electric tiller is tested
PSO2	Maintenance of the motor and the blades done.
PSO3	Entrepreneur skills attained