



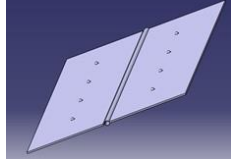
Aditya College of Engineering & Technology

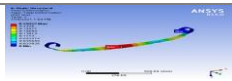
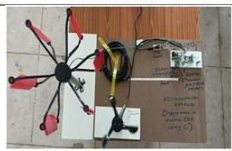
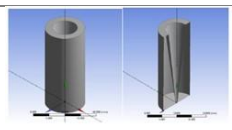
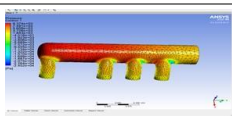
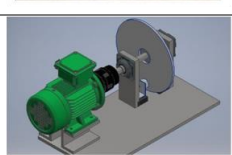
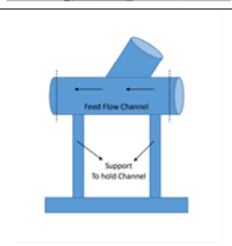
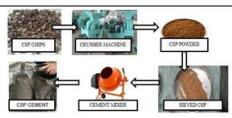
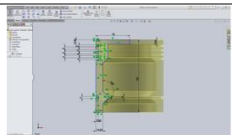
Aditya Nagar, ADB Road, Surampalem - 533437

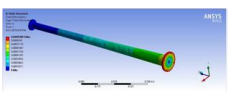
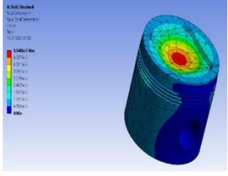
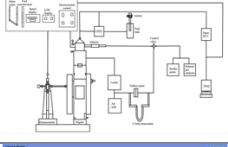
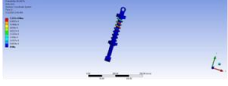
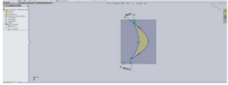
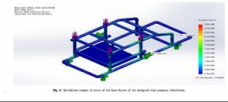
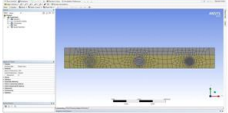
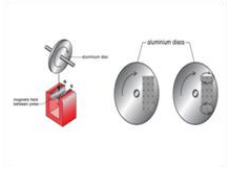
DEPARTMENT OF MECHANICAL ENGINEERING

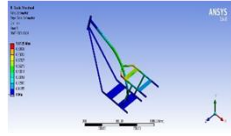
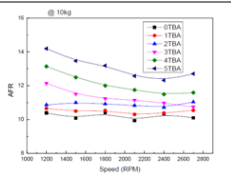
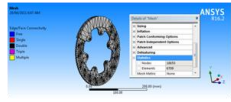
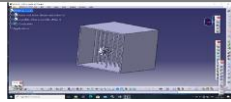
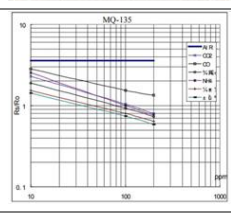
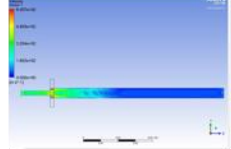
Academic Year 2020-21 Projects

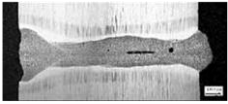
Quality of completed projects/working prototypes

Batch No	TITLE	Model/Prototype
1	Design and Analysis of Valve Gear Mechanism using Finite Element Analysis	
2	Modelling and Implementation of Dual Axis Solar Tracking System	
3	Experimental investigation on CNG as a Fuel in Two-Wheeler	
4	Design and Fabrication of Serial Robotic Arm	
5	Fabrication of Chilled Water Dispenser System	
6	Performance Analysis of Raiserless Solar Water with Dented Absorber Plate	

7	High Speed Four way Hacksaw machine using Scotch Yoke Mechanism	
8	Design and FEA Analysis of Composite Leaf Spring	
9	Design and 3D Prototyping of Vertical Turbine - IoT Based Testing	
10	Design and Fabrication of Abrasive Jet Machine	
11	Design and Flow Analysis of Intake Manifold For Light Commercial Vehicles by using Computational Fluid Dynamics	
12	Design and Simulation of All Terrain Vehicle	
13	Characterization of Glass Fiber Reinforced Polymer Composite Prepared by Hand Layup Method	
14	Design and Fabrication of Contactless Braking System	
15	Design and Analysis of Aqua Feed Sprayer for Easy Farming.	
16	Corrosion Behavior of Ni Coated Aluminium Reinforced with Coconut Shell Ash Composites	
17	Thermal Analysis and Optimization of I.C Engine Piston using Finite Element Method	
18	Fabrication and Testing of Neem Shell Resin, Bamboo and Pineapple Fiber Reinforced Composites	

20	Design of Portable Electric Power Tiller Machine	
21	Smart conveyor system using Swarm robots	
22	Design and Prototyping of Smart Hoisted Delta Pick and Place Robot	
23	Crack Initiation & Propagation Analysis on Heavy Vehicle Propeller Shaft by using Wavelet Transform	
24	Performance Analysis of VCR Engine for Various Piston Designs and Configurations	
25	An Investigation of Friction Stir Welding Process Parameters for Joining Al-Alloys	
26	Performance and Emission Characteristics of S.I Engine by using Oxygenated Additives by Varying Load at Different Speeds	
27	Design and Analysis on Suspension System of a Hybrid Two-Wheeler Bike	
28	Thermal Analysis of the Gas Turbine Rotor Blade	
29	Design and Analysis of Convertible Wheel Chair to Sleeping Bed	
30	CFD Analysis of Solar Flat Plate Collector	
31	Fabrication of Electromagnetic Braking System	

32	Design and Structural Analysis of Hybrid Two-Wheeler Bike																																					
33	Design and Analysis of Windmill Operated Water Pump with Two Different AirFoil																																					
34	Design and Prototype of Smart Hoisted Delta Pick and Place Robot																																					
35	Design and Prototype of Smart Material Handling System																																					
36	Experimental Studies on the Effect of Oxygenated Additives on Spark Ignition Engine	 <table border="1"> <caption>Approximate data from Figure 36</caption> <thead> <tr> <th>Speed (RPM)</th> <th>OTBA</th> <th>TTBA</th> <th>2TBA</th> <th>3TBA</th> <th>4TBA</th> </tr> </thead> <tbody> <tr> <td>1000</td> <td>12.5</td> <td>13.5</td> <td>14.5</td> <td>15.5</td> <td>16.5</td> </tr> <tr> <td>1500</td> <td>12.2</td> <td>13.2</td> <td>14.2</td> <td>15.2</td> <td>16.2</td> </tr> <tr> <td>2000</td> <td>12.0</td> <td>13.0</td> <td>14.0</td> <td>15.0</td> <td>16.0</td> </tr> <tr> <td>2500</td> <td>11.8</td> <td>12.8</td> <td>13.8</td> <td>14.8</td> <td>15.8</td> </tr> <tr> <td>3000</td> <td>11.5</td> <td>12.5</td> <td>13.5</td> <td>14.5</td> <td>15.5</td> </tr> </tbody> </table>	Speed (RPM)	OTBA	TTBA	2TBA	3TBA	4TBA	1000	12.5	13.5	14.5	15.5	16.5	1500	12.2	13.2	14.2	15.2	16.2	2000	12.0	13.0	14.0	15.0	16.0	2500	11.8	12.8	13.8	14.8	15.8	3000	11.5	12.5	13.5	14.5	15.5
Speed (RPM)	OTBA	TTBA	2TBA	3TBA	4TBA																																	
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37	Optimization of Design and Static Thermal Analysis of Disc Rotor using Finite Element Method																																					
38	Design and Fabrication of Phase Change Material Air Cooler																																					
39	Improving Productivity of Double Slope Solar Still using NANO Coated Basin Materials																																					
40	Monitoring and Detection of Vehicle Emissions	 <table border="1"> <caption>Approximate data from Figure 40</caption> <thead> <tr> <th>Speed (km/h)</th> <th>CO</th> <th>HC</th> <th>NOx</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>1.5</td> <td>0.5</td> <td>0.2</td> </tr> <tr> <td>50</td> <td>1.2</td> <td>0.4</td> <td>0.15</td> </tr> <tr> <td>100</td> <td>1.0</td> <td>0.3</td> <td>0.1</td> </tr> <tr> <td>150</td> <td>0.8</td> <td>0.2</td> <td>0.08</td> </tr> <tr> <td>200</td> <td>0.6</td> <td>0.15</td> <td>0.06</td> </tr> </tbody> </table>	Speed (km/h)	CO	HC	NOx	10	1.5	0.5	0.2	50	1.2	0.4	0.15	100	1.0	0.3	0.1	150	0.8	0.2	0.08	200	0.6	0.15	0.06												
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41	Design and Simulation of Vortex tube with Different Conical Control Valves																																					

42	Fabrication of Frictionless Electromagnetic Braking System	
43	Design and Analysis of OMNI Ball Spherical Wheel	
44	Design and 3D Prototyping of Horizontal Turbine - IoT Based Testing	
45	Study on use of Radiant Energy Welding Processes in Defence and Space Applications	
46	Design and Analysis of Electric Bike	