

## Department of Mechanical Engineering

### Sanctioned R&D Projects

#### 2023-24

S.No.	Title of the Project	Funding Agency	Grant in (Rs.)
1	Defect Detection On Welded Joints Using Ultrasonic Testing	Gayathri educational and Development Society	5000
2	Analysis Of Ultrasonic Testing On Hot Roller Mild Steel Plate	Gayathri educational and Development Society	5000
3	Design and Fabrication of Dexterity of a Human Hand By Using 3D Printing	Gayathri educational and Development Society	5000
4	Design and Fabrication of Linear Actuator By Using 3D Printing	Gayathri educational and Development Society	5000
5	Design and Fabrication of Stamping Mechanism By Using 3D Printing	Gayathri educational and Development Society	5000
6	Design and Fabrication of 3D Printed Plane Turbine Mechanism	Gayathri educational and Development Society	5000
7	Design and Fabrication of Walking Gear Mechanism By Using 3D Printing	Gayathri educational and Development Society	5000
8	Developing of material segregation system by using PLC	Gayathri educational and Development Society	4900
9	Automatic HVAC System Screen Development Using SCADA	Gayathri educational and Development Society	9800
10	Leakage detection by using PLC in Oil and Gas Industries	Gayathri educational and Development Society	9800
<b>Total</b>			<b>59,500</b>

#### 2022-23

S.No.	Title of the Project	Funding Agency	Grant in (Rs.)
1.	Design and Fabrication of Golf Cart Electric Vehicle	Gayathri educational and Development Society	245216
2.	Fabrication of Fatigue Specimen using Stir Casting Method	Gayathri educational and Development Society	9500
3.	Fatigue Characterization of A356-SiC Metal Matrix Nano Composites using Stir Casting Method	Gayathri educational and Development Society	9500
<b>Total</b>			<b>2,64,216</b>

#### 2021-22

S.No	Title of the Project	Funding Agency	Grant in (Rs.)
1.	Manipulation of Robotic Arm By Using QR Code	Gayathri educational and Development Society	9900
2.	Fabrication and Analysis of Keychain Using Injection Moulding and 3D Printing	Gayathri educational and Development Society	9500

3.	PLC Based Automatic Liquid Filling And Mixing System	Gayatrhi educational and Development Society	9900
4.	PLC Based Water Level Indicator & Controlling System	Gayatrhi educational and Development Society	9900
5.	Design and Fabrication of Geneva Mechanism Using 3D Printer	Gayatrhi educational and Development Society	9900
6.	Design And Transmission of Go-Kart Vehicle	Gayatrhi educational and Development Society	9900
7.	Design and Fabrication APP Controlled Robot	Gayatrhi educational and Development Society	9900
8.	Design And Fabrication Of Injection Moulding Die By Using Wire EDM	Gayatrhi educational and Development Society	9500
9.	Automatic Traffic Control System Using PLC	Gayatrhi educational and Development Society	9900
10.	Design and Modeling of Go-Kart Vehicle	Gayatrhi educational and Development Society	9900
11.	Effect of Alluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) Nano Lubricant On The Performance of VCR System	Gayatrhi educational and Development Society	9400
<b>Total</b>			<b>1,07,600</b>

**2020-21**

<b>S.No</b>	<b>Title of the Project</b>	<b>Funding Agency</b>	<b>Grant in (Rs.)</b>
1.	Developing and Characterization of 3D Printing Objects using Different Polymer Materials and Integration of Autodesk Recap Software	NIDHI, TBI	1500040
2.	Design and Fabrication of Experimental Setup to Determine Natural Frequency	Gayatrhi educational and Development Society	17150
3.	Design and Analysis of IC Engine Piston and Piston Rings By Using Different Materials	Gayatrhi educational and Development Society	36000
4.	Fabrication and Analysis Of A356-Sic And A356-Graphite Metal Matrix Composites By Using Stir Casting Method	Gayatrhi educational and Development Society	16470
5.	Performance of CI Engine By Using Biodiesel And Iron Oxide Nanoparticles	Gayatrhi educational and Development Society	12674
6.	Automatic Robo arm Manipulation For The Application of Serving Beverages Using Visual Feedback	Gayatrhi educational and Development Society	13389
7.	Design And Fabrication 3d Printed Prosthetic Hand	Gayatrhi educational and Development Society	22491
<b>Total</b>			<b>16,18,214</b>

**2019-20**

<b>S.No</b>	<b>Title of the Project</b>	<b>Funding Agency</b>	<b>Grant in (Rs.)</b>
1.	Developing Different Industrial Applications by Using Low Cost Automation IGUS robots	ECM, Germany	983017
2.	Evolution and comparison of Mechanical properties of 3D printed PLA material with different filling patterns	Gayatrhi educational and Development Society	14000
3.	Studies on microbiological growth and machining characteristics over magnesium metal matrix composites	Gayatrhi educational and Development Society	20000
4.	Experimental analysis of single cylinder diesel engine fuelled with biodiesel and aluminum oxide nanoparticles	Gayatrhi educational and Development Society	37400
5.	Fabrication & Finite Element analysis of natural fiber reinforcement polymer composites	Gayatrhi educational and Development Society	6000
6.	Determination of loss of head due to sudden expansion and contraction	Gayatrhi educational and Development Society	9500
7.	Agriculture Spraying Drone	Gayatrhi educational and	10000

		Development Society	
8.	Pick & place operation by collaborating Electromagnetic and pneumatic Gripper Robots	Gayathri educational and Development Society	5000
9.	Development of Mechatronics Applications using PLC and Sensors	Sri Mittapalli Trust	<b>1000000</b>
<b>Total</b>			<b>20,84,917</b>