6.2 Research and Development Activities

6.2.1 Academic Research

.Table No.6.2.1.1: Faculty publication details.

S.N.	Item	CAYm1 2023-24	CAYm2 2022-23	CAYm3 2021-22
1	No. of peer reviewed journal papers published	**2**	**1**	**2**
2	No. of peer reviewed conference papers published	**2**	**2**	**3**
3	No. of books /book chapters published	**2**	**-**	**-**

6.2.2 Development Activities

Si.No	Name Of Faculty	Title Of The Patent	Patent Status	Patent Office (Country)	Publication Date
1	Mr.Shivashankar.R	Sutainable Compressed Air Generation Through Vehicle Suspension System	Published	India	19-09-2024
2	Mr.Shivashankar.R	Natural Fiber Reinforced Hybrid Polymer Composites	Published	India	15-11-2024
3	Dr.Aboobucker Parvez Y	Natural Fiber Reinforced Hybrid Polymer Composites	Published	India	15-11-2024
4	Mr.Antony.V	Natural Fiber Reinforced Hybrid Polymer Composites	Published	India	15-11-2024
5	Mr.Logesh .B	Natural Fiber Reinforced Hybrid Polymer Composites	Published	India	15-11-2024
6	Mr.Midhun .R	Natural Fiber Reinforced Hybrid Polymer Composites	Published	India	15-11-2024

7	Mr.Manivannan. R	Domestic Refrigerator By Using R134a And Hc Blend As Refrigerant	Published	India	13-12-2024
8	Mr.Antony.V	Domestic Refrigerator By Using R134a And Hc Blend As Refrigerant	Published	India	13-12-2024
9	Dr.Aboobucker Parvez Y	Domestic Refrigerator By Using R134a And Hc Blend As Refrigerant	Published	India	13-12-2024
10	Mr.Shivashankar.R	Domestic Refrigerator By Using R134a And Hc Blend As Refrigerant	Published	India	13-12-2024
11	Mr.Midhun .R	Domestic Refrigerator By Using R134a And Hc Blend As Refrigerant	Published	India	13-12-2024
12	Mr.Logesh .B	Developing Of Tin Based Cerium Solider Alloy	Published	India	06-12-2024

6.2.3 Sponsored Research Project

TableNo.6.2.3.1: List of sponsored research projects received from external agencies.

S.N.	**PI name**	**Co-PI Names if any**	**Name of the Dept., where project is sanctioned**	**Project title***	**Name of the Funding agency**	**Duration of the project**	**Amount (Lacs)**
CAYm1 2023-2024							
1	Dr. G Nandagopal	-	Mechanical Engineering Department , Sree Sakthi Engineering College	Development Of Electro magnetic materials Based Ultra-Thin Film Sensors	Talema Electronic (India) Pvt. Ltd Salem	11 Months	2.05

2	Mr.R.Midhun	-	Mechanical Engineering Department , Sree Sakthi Engineering College	Investigation On The Effects Of Nanolubricants, Such As Alumina Nanoparticles, On Gear Hobbing To Reduce Tool Wear And Improve Surface Roughness.	Ev Gear Technologies, Coimbatore	18 Months	1.50
						Amount received(Rs.)	3.55
CAYm2 2022-23							
1	Dr. A.Balaji	-	Mechanical Engineering Department , Sree Sakthi Engineering College	Incorporating Viscoelastic Layers Into Composites To Enhance Damping Properties	Makon Solution, Chennai	12 Months	2.5
2	Mr.K.Saravanan	-	Mechanical Engineering Department , Sree Sakthi Engineering College	Developing Analytical And Numerical Models To Accurately Predict The Elastic Recovery And Changes In Spring Diameter After Manufacturing, Improving Precision And Reducing Waste.	J.S.Springs Industries,Coimbatore	8 Months	1.28
						Amount received(Rs.)	3.78
CAYm3 2021-22							
1	Mr.S.Kamban	-	Mechanical	Nvh (Noise,	Taark Equipments Pvt.	6 Months	3.0

			Engineering Department , Sree Sakthi Engineering College	Vibration, And Harshness) Analysis For 3 Wheeler	Ltd,Coimbatore		
2	Dr. A.Balaji	-	Mechanical Engineering Department , Sree Sakthi Engineering College	Development And Implementionof Advanced Ndt Methods For The Detection Of Internal Defects And Surface Flaws In Manufactured Gears To Ensure High Quality.	Ev Gear Technologies, Coimbatore	10 Months	2.95
						Amount received(Rs.)	5.95
Total Amount(Lacs)Received for the Past 3 Years							13.28

6.2.4 Consultancy Work

Table No.6.2.4.1: List of consultancy projects received from external agencies.

S. No.	PI name	Co-PI names if any	Name of Dept.,where Project sanctioned	Project title*	Name of the Funding agency	Duration of the project	Amount (Lacs)
CAYm1 (2023-2024)							
1	Dr.G.Jayaprakash	Dr.Aboobucker Parvez	Mechanical Engineering	Sand Mixer Paddle And Blade Design Optimizatio n For	Sree Sakthi Equipments Company	01/03/2023 To 30/06/2023	Rs 1,00,000/-

				Enhanced Mixing Efficiency			
2	Dr.A.Balaji	Mr.B.Logesh	Mechanical Engineering	Shot Blasting Machine Performance And Turbine Blade Optimizatio n	Sree Sakthi Equipments Company	01/03/2023 To 30/06/2023	Rs 1,50,000/-
3	Dr.M.Vijayakumar	Dr.Nanda Gopal G	Mechanical Engineering	High-Pressure Moulding Line Optimizatio n For Enhanced Performance And Durability	Sree Sakthi Engineering Company	01/11/2023 To 31/01/2024	Rs 1,00,000/-
4	Dr.G.Jayaprakash	Dr.Aboobucker Parvez	Mechanical Engineering	Auto Pouring System Simulation And Optimizatio n For Precision Casting	Sree Sakthi Engineering Company	01/11/2023 To 31/01/2024	Rs 1,00,000/-
						Amount Received (Rs.)	**4,50,000**
Caym2 (2022-2023)							
1	Dr.M.Vijayakumar	Mr.V.Antony	Mechanical	Core Shop	Sree Sakthi	01/01/2022	Rs

			Engineering	Tooling Design And Rapid Prototyping	Equipments Company	To 30/03/2023	2,50,000/-
2	Dr.G.Jayaprakash	Dr.Aboobucker Parvez	Mechanical Engineering	Simulation Of Castings Using Advanced Software	Sree Sakthi Equipments Company	01/01/2022 To 30/03/2023	Rs 2,50,000/-
3	Dr.Maniraj M	Mr.R.Midhun	Mechanical Engineering	Automation Of Casting Handling For Improved Efficiency And Safety	Sree Sakthi Equipments Company	01/01/2022 To 30/03/2023	Rs 2,50,000/-
4.	Dr.A.Balaji	Mr.B.Logesh	Mechanical Engineering	Pattern Plate Design Optimization Through Simulation For Dimensional Accuracy	Sree Sakthi Equipments Company	01/01/2022 To 30/03/2023	Rs 2,50,000/-
						Amount Received(Rs.)	**10,00,000/-**
Caym3 (2021-2022)							
1	-	-	-	-	-	-	-
						Amount Received(Rs.)	-
Total Amount(Lacs)Received For The Past 3 Years							**14,50,000**

6.2.5 Institution Seed Money or Internal Research Grant to its Faculty for Research Work

Table No.6.2.5.1: List of faculty members received seed money or internal research grant from the Institution.

S.No.	Faculty name	Project title/ Support for Activity	Duration	Amount (Lacs)	Amount Utilized (Lacs)	Outcomes ofthe project
CAYm1(2023-2024)						
1	Mr.B.Logesh	Experimental Investigations To Deploy Green Manufacturing Practices Through Waste Reduction Using Lean Tools	2 Month	1.00	1.00	• Developed Strategies For Waste Reduction In Manufacturing Processes • Improved Resource Utilization • Provided A Framework For Adopting Lean Tools In Green Manufacturing Practices • Results Shared With Students For Academic Enrichment.
2	Mr.R.Shiva Shankar	Design And Implementation Of Compressed Air Generation Using Vehicle Suspension System	2 Month	1.00	1.00	• Successfully Demonstrated A Prototype That Converts Suspension Motion Into Usable Compressed Air; • Showed Potential For Sustainable

						Energy Recovery In Automobiles; • Contributed To Student Projects And Further Research Opportunities.
3	Mr.P.Varadharaj	International Conference	2 Month	1.00	1.00	• Participation In International Conference Facilitated Knowledge Sharing And Networking; • Presented Institutional Research Outcomes; • Strengthened Academic Visibility And Collaborations At A Global Platform
Amount Received(Rs.) 3.00 Lacs						

CAYM2 (2022-2023)						
1	Mr.V.Antony	Automatic Solar Panel Cleaning System Using Iot	6 Months	1.00	1.50	• Increased Solar Panel Efficiency, • Reduced Manual Labor And Maintenance Costs, • Remote Monitoring And Control Capabilities Through A Web Or Mobile Application
2	Mr.R.Midhun	Design And Analysis Of Intelligent Braking System	5 months	0.50	0.50	• Functional Prototype. • Improved Safety And Reduced Accident Risk • Performance Analysis System • Integration Structural And Component Analysis
Amount Received(Rs.)					2.00 Lacs	
CAYM3 (2021-2022)						
1	Mr.R.Midhun	Reforestation Using Self Driven Robot	10 months	0.75	0.75	• Using Autonomous Systems To Plant Trees • Monitor Conditions, And

						Track Growth In Challenging Terrains • Accelerating The Process • Increasing Seedling Survival Rates
2	Mr.V.Antony	Design And Fabrication Of Autonomous 180 Degree Firefighting Robot	12 months	0.75	0.75	• Integrated System's Ability To Navigate • Avoid Obstacles • Send Alerts (Like Sms) • Successfully Suppress Small Fires Autonomously, • Demonstrating Improved Safety And Efficiency For Firefighting Operations.
Amount Received(Rs.)					1.5 Lacs	-
Total Amount(Lacs) Received For The Past 3 Years					-	**6.50 Lacs**