



**RAJALAKSHMI**  
ENGINEERING COLLEGE  
An AUTONOMOUS Institution  
Affiliated to ANNA UNIVERSITY, Chennai



S.No	PS CODE	PROBLEM STATEMENT	DESCRIPTION
1	PS 01	Smart Irrigation System	Develop an Automated Smart Irrigation System for Precision Farming using Smart Device
2	PS 02	Crop Disease Diagnostics	Develop an AI-driven Mobile Portal for Crop Disease Diagnostics
3	PS 03	Fault Detection System	Develop an Automated Fault Detection System for Concealed Wiring
4	PS 04	Face Liveness Detection for Identifying Missing People	AI-Driven technique that verifying, whether a detected face is real or spoof
5	PS 05	Accessible Learning Platform for Visually and Hearing-Impaired Students	Integrate sign language etc. to enhance learning accessibility also ensure inclusive education –Interactive tool
6	PS 06	Game platform for children	Gamified Platform on Children's Rights for Legal Literacy
7	PS 07	Body detection in CSSR activities	Develop an Engineering Solution to Enhance Body Detection in CSSR Operations

8	PS 08	Cost-Effective Myoelectric Prosthesis	Develop a Cost-Effective Myoelectric Prosthesis
9	PS 09	AI-Driven Metal Scrap Sorting System	Metal scrap sorting using computer vision & ML technique
10	PS 10	Welding defect detection	Cost-Effective Sensor-Driven Welding Defect Detection
11	PS 11	Sensor-Integrated Cap for Worker Safety	Develop a Sensor-Integrated Cap for Worker Safety
12	PS 12	Gyroscopic-Based Stability	Develop a Gyroscopic-Based Stability Solution for Two-Wheelers
13	PS 13	Mechanically Driven Pruning Device for Plant Growth	Develop & fabricate a mechanically Driven Pruning Device for Plant Growth
14	PS 14	Prototype for Air Contamination Removal in Urban Areas	A prototype for advance filtration & purification Technique
15	PS 15	Lightweight, Compact, and Energy-Efficient Cooling System for EV Batteries	A cooling system (Design/ Prototype /Simulation) Enhance battery life span & safety with minimal power consumption
16	PS 16	IoT-Based HVAC System with Occupancy-Based Temperature Adjustment	Optimising heating & cooling in response to room usage pattern

17	PS 17	Energy-Efficient Smart Street Lighting System	Automatically adjust the brightness based on traffic & environmental condition
18	PS 18	Portable EMI/EMC & Induction Measurement Instrument	Real time analysis for compliance testing & electromagnetic field monitoring
19	PS 19	Proximity-Based Alert System for Two-Wheelers	Detect near- by vehicle & obstacles –Provide real time alert –Reduce collision risk
20	PS 20	Automated Smudge Detection System for Sewage Maintenance	Detect smudge blockage & contamination in the pipe line using AI
21	PS 21	User-Friendly Household Waste Segregation Device	Sort house hold based in to various category –promoting recycle& waste management
22	PS 22	AI/ML Chatbot for Community Engagement in River Conservation	Facilitate public participation - promoting sustainable water management
23	PS 23	Portable Water Filtration Pump	Develop a compact, manually operated or low-power pump that filters contaminated water.
24	PS 24	Off-Grid Refrigeration Unit	Create a small-scale refrigeration device for regions with unreliable electricity.
25	PS 25	Low-Cost Prosthetic Limb Enhancements	Design an affordable, easily manufactural prosthetic limb or accessory.

26	PS 26	Modular Emergency Shelter	Construct a quick-assembly shelter system with weather-resistant features for disaster zones.
27	PS 27	Low-Cost Wind Turbine for Households	Build a compact wind turbine that can be locally manufactured for partial power needs.
28	PS 28	Lightweight Wheelchair with Shock Absorption	Develop a low-cost chair that handles rough terrains comfortably.
29	PS 29	Low-Cost Biogas Digester	Construct a sealed unit to convert organic waste to biogas for cooking/heating.
30	PS 30	Community-Scale Plastic Shredder & Extruder	Develop a small facility to turn plastic waste into reusable filament or blocks.
31	PS 31	Rainwater Harvesting System with Filter	Build a mechanically robust rooftop setup with basic filtration.
32	PS 32	Low-Cost Incubator for Rural Clinics	Create a simple, stable infant incubator with minimal electrical or mechanical control.
33	PS 33	Mechanical Waste Segregator	Design a sorting device for recyclables (metal, plastic, paper) and organic waste.
34	PS 34	Community Grain Storage Silo with Pest Control	Create a low-cost silo that prevents spoilage and infestations.

35	PS 35	Low-Cost Air Purifier using Local Materials	Construct a device with basic filters (charcoal, cloth) to reduce indoor air pollution.
36	PS 36	Emergency Mobile Bridge	Design a rapid-deployment bridge that can be carried and installed in disaster-hit areas.
37	PS 37	Wheelchair Stair-Climbing Attachment	Develop an add-on that helps manual wheelchairs navigate short stairs or curbs.
38	PS 38	Low-Profile Windmill for Water Pumping	Build a vertical-axis or compact wind turbine that drives a water pump.
39	PS 39	Agricultural Drone Launcher & Recovery System	Construct a mechanical catapult for drone take-off and a safe retrieval method.
40	PS 40	Eco-Friendly Road Repair Kit	Create a small-scale mechanical solution to fill potholes using recycled materials.
41	PS 41	Wind-Up Lighting System for Rural Homes	Build a mechanical energy storage device that powers a small lamp.
42	PS 42	Urban Rooftop Greenhouse Structure	Design a lightweight, modular frame for growing plants on urban rooftops.
43	PS 43	Mechanical Cooling Vest	Develop a wearable that provides cooling to people in extremely hot working conditions.