ADITYA COLLEGE OF ENGINEERING & TECHNOLOGY

Permanently Affiliated to JNTUK, Kakinada, Approved by AICTE, New Delhi

Recognized by UGC Under Section (2f) and 12(B) of UGC Act 1956

Aditya Nagar, ADB Road, Surampalem,533437

Department of Mechanical Engineering

Project Title:	FABRICATION OF AIR CONDITIONING CUM WATER DISPENSER SYSTEM	
Guide Name:	Mr. V.Siva Nagi Reddy	
Students Name with Roll No.:	M.P.RAMESH SWAMI REDDY	17P35A0383
	N.MANIKANTA	17P35A0384
	T.VIJAYA RAJU	17P35A0366
	K.M.SRINIVASA RAO	17P35A0385
	M.R.N.SRINIVASU	16P31A03E8
	B.S.K. CHANUKYA	17P35A0371

Abstract	PO's Mapping	PSO's Mapping
This project "Combined Air Refrigeration, Air Conditioner and Water Dispenser systems" deals with the study of air conditioner, air refrigeration and water dispenser system in a single unit. The main object behind this project is to develop the multifunctional system which can provide cold water, refrigeration effect and air-conditioning effect with regular air/space conditioning system. The design mainly consists of compressor, condenser, expansion valve and other accessories (back pressure valve and diffuser). The refrigerant is used as a medium which absorbs the heat from the low temperature system and discards the heat so absorbed to a higher temperature system. This transfer of heat is used in a sensible manner to bring out the various heating and cooling effect. Common condenser and common compressor feds the system having separate evaporators. Various design and operations were modified with a view to save space, initial and maintenance costs.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9, PO10,	PSO1, PSO2, PSO3

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

Relevance to PO's and PSO's

PO1	Applied the subject knowledge for reducing the temperature of air
PO2	Study and analyse the designs of refrigeration system to get multiple outputs
PO3	Design and development of solution for studying different refrigerants
PO4	Calculating the refrigeration effect, increasing and decreasing of water in vessels in the system with given inputs.
PO5	Various advanced tool are used to make the design easy
PO6	By reducing emissions health and safety measures are increased by reducing the usage different systems
PO7	This project helps in reduction of pollution.
PO9	Experimental investigation has done by team work.
PO10	Students are able to present their work through presentation and documentation.
PO11	Plan of action to completing the experimental investigation.
PO12	Business plan contains the work flow and cost control
PSO1	Different refrigerants are compared and best refrigerant has used to obtained best performance from the system
PSO2	Maintenance of the system and the sub systems done.
PSO3	Suitable management skills are attained by doing this work.