

**DESIGN AND LOAD CALCULATION ON HEATING,
VENTILATION AND AIR CONDITIONING SYSTEM**

A Project Report submitted in partial fulfilment of requirements for the
Award of the degree of

**BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING**

By

K.GOWTAM KRISHNA	(14811A0359)
B. SIVA KUMAR	(14811A0313)
M. VENKATESH	(14811A0366)
CH. JAYA RAM	(14811A0324)

Under the Esteemed Guidance of
Sri GANESH SURLA M. Tech.
Assistant Professor



DEPARTMENT OF MECHANICAL ENGINEERING

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

**(Permanently affiliated to JNTU-KAKINADA, accredited by NBA & NAAC (B+),
approved by AICTE, recognized by UGC 12f & 2b)**

TAMARAM (V), MAKAVARAPALEM (M),

NARSIPATNAM (DIVISION), VISAKHAPATNAM DISTRICT-531113

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AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

(AN NBA ACCREDITED COLLEGE)

Makavarapalem, Narsipatnam, Visakhapatnam-531113

DEPARTMENT OF MECHANICAL ENGINEERING



CERTIFICATE

This is to certify that this project work entitled " **DESIGN AND LOAD CALCULATION ON HEATING, VENTILATION AND AIR CONDITIONING SYSTEM** "that is being submitted by **K. GOWTAM KRISHNA (14811A0359), B.SIVAKUMAR (14811A0313), M. VENKATESH (14811A0366), CH. JAYA RAM (14811A0324)** to **AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, Makavarapalem, Visakhapatnam** in partial fulfilment of the requirements for the award of degree of **BACHELOR OF TECHNOLOGY in MECHANICAL ENGINEERING** is a bonafide work carried out by them under my guidance and supervision during the year **2014-2018**.

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03-04-18

Project Guide

Handwritten signature

Head of the Department

Handwritten signature

External Examiner

**HEAD OF THE DEPARTMENT
MECHANICAL ENGINEERING
Avanthi Institute of Engg. & Tech
Makavarapalem, Visakhapatnam-531113**

ABSTRACT

Heating ventilation and air conditioning (HVAC) systems control the temperature, humidity and quality of air in building to a set of chosen conditions. To achieve this, the system need to transfer heat and moisture into and out of the air as well as control the level of air pollutants, either by directly removing them or by diluting them to acceptable levels.

The purpose this report is to solicits HVAC and for which a refrigeration& air conditioning system for a class room is researched. Design of HVAC is done by using CATIA software. The basic operation of air conditioning equipment is explained and designed. The basic concepts of green building and discusses the role of HVAC for ensuring high performance sustainable buildings in design and operation. The design strategies for effective and green HVAC systems are explained and the new emerging HVAC technologies for green buildings are described. It is hoped that HVAC designers and other building professionals could develop a better understanding of green buildings and apply effective strategies for meting optimum running cost.