

**DEPARTMENT OF MECHANICAL ENGINEERING VASAVI  
COLLEGE OF ENGINEERING (AUTONOMOUS)**

**(Affiliated to Osmania University, approved by AICTE and accredited by NBA)**



**CERTIFICATE**

This is to certify that the work in this dissertation entitled “**NOISE SOURCES AND ITS CONTROL IN A SHUTTLE POWER LOOM**” submitted by **ABDUL SAMEER AHMED** bearing Roll no **1602-20-745-001** has been read and approved for meeting during part of the requirements and regulations governing the award the degree of **Master of Engineering** in Mechanical Engineering with specialization in **Advanced Design and Manufacturing** during academic year 2021-2022 in the Department of Mechanical Engineering, Vasavi College of Engineering.

The work done in this dissertation has not been submitted to any other University/Institute for the award of any degree or diploma.


Date: 20.07.2022

Date: 20/7/22



Signature of the Supervisor,  
**DR.P.V.S.SUBHASHINI**

**Assistant Professor,  
Department of Mechanical Engineering**



Signature of the Head of the Dept  
**Dr. T. RAMAMOCHAN RAO**

**Professor & HOD,  
Department of Mechanical Engineering**

**DEPARTMENT OF MECHANICAL ENGINEERING VASAVI COLLEGE  
OF ENGINEERING (AUTONOMOUS)**

**(Affiliated to Osmania University, approved by AICTE, and accredited by  
NBA)**



**CERTIFICATE**

This is to certify that the work in this dissertation entitled "INVESTIGATION OF MECHANICAL PROPERTIES BASED ON TAGUCHI METHOD OF PLA AND NYLON PARTS FABRICATED BY FDM USING 3D PRINTING TECHNOLOGY" submitted by MARUMUDI JOYCE DAYAL roll.no 1602-20-745-002 has been read and approved for meeting during part of the requirements and regulations governing the award the degree of Master of Engineering in Mechanical Engineering with specialization in Advanced Design and Manufacturing during academic year 2021-2022 in the Department of Mechanical Engineering, Vasavi College of Engineering.

The work done in this Dissertation has not been submitted to any other University/Institute for the award of any Degree or Diploma.

Date: 18/7/22

Signature of the Supervisor,  
T. KRISHNA CHAITANYA  
Assistant Professor,  
Department of Mechanical Engineering

Date: 18/7/22

Signature of the Head of the Department  
DR.T. RAMA MOHAN RAO (Professor & HOD),  
Department of Mechanical Engineering

**DEPARTMENT OF MECHANICAL ENGINEERING VASAVI  
COLLEGE OF ENGINEERING (AUTONOMOUS)**

(Affiliated to Osmania University, approved by AICTE and accredited by NBA)



**CERTIFICATE**

This is to certify that the work in this dissertation entitled “**Design, Analysis and Fabrication of mono composite leaf spring**” submitted by **DURGAM KARNA** bearing Roll no **1602-20-745-003** has been read and approved for meeting during part of the requirements and regulations governing the award the degree of **Master of Engineering** in Mechanical Engineering with specialization in **Advanced Design and Manufacturing** during academic year 2020–21 in the Department of Mechanical Engineering, Vasavi College of Engineering.

The work done in this dissertation has not been submitted to any other University/Institute for the award of any degree or diploma.

Date: 20/7/2022

Signature of the Supervisor,  
**Mr.K.SRINIVASA RAO**

Associate Professor,  
Department of Mechanical Engineering

Date: 21/7/22

Signature of the Head of the Dept.  
**Dr.T. RAMAMOohana RAO**  
Professor & HOD,  
Department of Mechanical Engineering

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

(Affiliated to Osmania University, Approved by AICTE and accredited by NBA)




**CERTIFICATE**

This is to certify that the work in this dissertation entitled “**Noise Assessment of Shuttle Power Loom in a Confined Spaces and Its Control**” submitted by **MADDURI MAHIPAL REDDY** bearing **Roll No: 1602-20-745-004** has been read and approved for meeting during part of the requirements and regulations governing the award the degree of **Master of Engineering** in Mechanical Engineering with specialization in **Advanced Design and Manufacturing** during academic year 2021–22 in the Department of Mechanical Engineering, Vasavi College of Engineering.

The work done in this dissertation has not been submitted to any other University/Institute for the award of any degree or diploma.

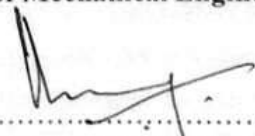
Date: 18/2/22

  
.....

Signature of the Supervisor

**Mr. V. B. S. RAJENDRA PRASAD**  
Associate Professor  
Department of Mechanical Engineering

Date: 18/2/22

  
.....  
Signature of the Head of the Dept.

**Dr. T. RAMAMOCHAN RAO**  
Professor & HOD  
Department of Mechanical Engineering

DEPARTMENT OF MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
(Affiliated to Osmania University, approved by AICTE and accredited by NBA)



CERTIFICATE

This is to certify that the work in this dissertation entitled “**Design and Vibration Analysis of Two Wheelers Helical Spring Shock Absorbers**” submitted by **MD Feroz** bearing **Roll no: 1602-20-745-005** has been read and found to be in compliance with some of the rules and guidelines regulating the awarding of the degree of Master of Engineering in Mechanical Engineering with a specialization in Advanced Design and Manufacturing for the academic year 2021–2022.

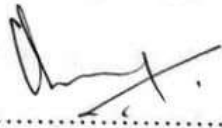
The work carried out in this dissertation has not been presented to any other University/Institute for the award of any degree or diploma.

Date: 19-07-2022

  
.....

Signature of the supervisor  
**VENUGOPAL REDDY**  
Assistant Professor,  
Department of Mechanical Engineering

Date: 19/07/22

  
.....

Signature of the Head of the Dept  
**Dr. T. RAMAMOCHAN RAO**  
Professor & HOD,  
Department of Mechanical Engineering

DEPARTMENT OF MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)

(Affiliated to Osmania University, approved by AICTE and accredited by NBA)




CERTIFICATE

This is to certify that the work in this dissertation entitled "**Kinematic and Dynamic analysis of 3 link robot manipulator**" submitted by **MOHD SHARIUDDIN** bearing Roll no **1602-20-745-006** has been read and approved for meeting during part of the requirements and regulations governing the award the degree of **Master of Engineering** in Mechanical Engineering with specialization in **Advanced Design and Manufacturing** during academic year 2021-22 in the Department of Mechanical Engineering, Vasavi College of Engineering.

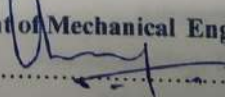
The work done in this dissertation has not been submitted to any other University/Institute for the award of any degree or diploma.

Date: 19.07.2022

  
.....  
Signature of The Supervisor,

**Mr. K. Veladri**  
Associate Professor,  
Department of Mechanical Engineering

Date: 21/07/22

  
.....  
Signature of the Head of the Dept.

**Dr.T. RAMAMOHAN RAO**  
Professor & HOD,  
Department of Mechanical Engineering

DEPARTMENT OF MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
(Affiliated to Osmania University, approved by AICTE and accredited by NBA)



CERTIFICATE

This is to certify that the work in this dissertation entitled 'Design of Composite Panel in an Aircraft wing' being submitted by **Kasani Pruthve Raaj** bearing roll no. 1602-20- 745-007 for partial fulfillment of the requirement for the award of ' **Master of Engineering in Mechanical Engineering** discipline with specialization of **Advanced Design and Manufacturing**, Vasavi College of Engineering, Ibrahimbagh ,Hyderabad during the academic year 2020 - 2022 is a record of bonafide piece of work, undertaken by him/her the supervision of the undersigned.

The work done in this Dissertation has not been submitted to any other University/Institute for the award of any Degree or Diploma.

*R. Gopikrishna*

Signature of the Guide,  
**Mr.R.Gopikrishna,**  
**Scientist-E,DRDL.**

Date: .....

*J. Anjaneyulu*

Signature of the Supervisor,  
**Dr.J.Anjaneyulu,**  
**Senior Assistant Professor,**  
**Department of Mechanical Engineering**

Date: *18/7/22*

*Dr. T. Ramamohan Rao*

Signature of the Head of the Department  
**Dr.T. Ramamohan Rao,**  
**Professor & HOD,**  
**Department of Mechanical Engineering**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

(Affiliated to Osmania University, Approved by AICTE and Accredited by  
NBA with 'A++')




**CERTIFICATE**

This is to certify that the work in this dissertation entitled "**DESIGN OF AN AXIAL FAN AND COMPUTATION OF ITS VOLUME FLOW RATE AND SOUND POWER LEVEL**" submitted by **KUMMURI RAJESH** bearing Roll no **1602-20-745-008** has been read and approved for meeting during part of the requirements and regulations governing the award the degree of **Master of Engineering** in Mechanical Engineering with specialization in **Advanced Design and Manufacturing** during the academic year 2021-22 in the Department of Mechanical Engineering, Vasavi College of Engineering.

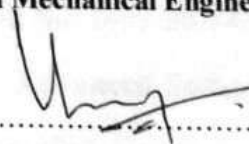
The work done in this dissertation has not been submitted to any other University/Institute for the award of any degree or diploma.

Date:.....



Signature of the Supervisor,  
**Mr. K. I. SPURGEON**  
Assistant Professor,  
Department of Mechanical Engineering

Date: 21/7/22



Signature of the Head of the Dept.  
**Dr. T. RAMAMOCHAN RAO**  
Professor & HOD,  
Department of Mechanical Engineering

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the project report entitled “*Collision-Free Path Planning of Industrial Robot Based on Improved RRT Algorithm in Complex Environments*” is a bonafide record of a project carried out by


Mohammed Khizar Ali Ansari - - - 1602-18-736-027

Dishank Kulkarni - - - 1602-18-736-011

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

  
**Mr. K. Veladri**  
Project Guide

Associate Professor  
Mechanical Engineering Dept.,  
Vasavi College of Engineering  
Hyderabad-500 031.

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

**CERTIFICATE**

This is to certify that the project report entitled "*Design Of Shell and Tube Heat Exchanger*" is a bonafide record of a project carried out by

M. Shreya Reddy	--- 1602-18-736-043
R. Sushma	--- 1602-18-736-049
R. Vennela	--- 1602-18-736-303

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2018-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.



**Pro. Mr. A. Srinivas**

Project Guide



**Dr. T. Ramamohan Rao**

Professor & HOD

Dept. of Mechanical Engineering.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**


## **CERTIFICATE**

This is to certify that the project report entitled "**Design And Analysis Of Green Composite Vehicle Body**" is a bonafide record of a project carried out by

Nadipudi Swarna     --- 1602-18-736-050  
Kunja Vamshi        --- 1602-18-736-055  
Buthapilli Vikas    --- 1602-18-736-058

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2018-19 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

  
**Mr. B. Sandeep**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-501 301

MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 501 301

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Project report entitled  
**"DESIGN, ANALYSIS & ADDITIVE MANUFACTURING OF  
A 3D IMPELLER"** is a bonafide record of a project  
work carried out by

<b>G. Abhinav</b>	<b>1602-18-736-001</b>
<b>K. Sujan</b>	<b>1602-18-736-017</b>
<b>M. Trinesh</b>	<b>1602-18-736-052</b>

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22 in partial fulfillment for  
the award of Degree in Bachelor of Mechanical  
Engineering.

**k. Srinivasa Rao**

**Project Guide**

Associate Professor

Mechanical Engineering Dept.,  
Vasavi College of Engineering

Hyderabad-500 031.

**Dr. T. Ramamohan Rao**

**Professor & HOD  
Dept. of Mechanical Engg.**

PROFESSOR

MECHANICAL ENGINEERING

VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) AFFILIATED  
TO OSMANIA UNIVERSITY IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the project report entitled "**DESIGN AND ANALYSIS OF COMPOSITE DRIVE SHAFT**" is a bonafide record of a project carried out by

S. Harith - - - 1602-18-736-016  
J. Manideep Raju - - - 1602-18-736-025  
G. Venkataswamy - - - 1602-18-736-301

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

Dr. J. Anjaneyulu  
Project Guide

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-31.

Dr. T. Ramamohan Rao  
Professor & HOD  
Dept. of Mechanical Engg.

Dr T RAMAMOHAN RAO  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad-31

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

# CERTIFICATE

This is to certify that the project report entitled "**Performance Study of Twisted Vaned Diffuser with Variable chord length in a Centrifugal Compressor Stage**" is a bonafide record of a project carried out by

Thoudoju Akhila --- 1602-18-736-005  
Mettu Chandu --- 1602-18-736-010  
Satar Laxmi Prasanna --- 1602-18-736-023

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

  
**Dr. P. Venkateswara Rao**

**Project Guide**

Associate Professor  
Mechanical Engineering Dept

  
**Dr. T. Ramamohan Rao**

**Professor & HOD**

Dept. of Mechanical Engg.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
 AFFILIATED TO OSMANIA UNIVERSITY  
 IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Project report entitled "**DESIGN AND ANALYSIS OF WATER JACKET COOLING SYSTEM OF A SIX CYLINDER DIESEL ENGINE**" is a bonafide record of a Project work carried out by

**N. Akhil**                      **1602-18-736-004**

**K.V.L.N. Amulya**    **1602-18-736-006**

**M. Deepak Surya** **1602-18-736-012**

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

**Dr. P. Venkateswara Rao**  
 Project Guide

**Dr. T. Ramamohan Rao**  
 Professor & HOD  
 Dept. of Mechanical Engg.

Associate Professor  
 Mechanical Engineering Dept.,  
 Vasavi College of Engineering  
 Hyderabad-500 031.

Dr T RAMAMOCHAN RAO  
 Professor & HOD  
 Dept. Of Mechanical Engg  
 Vasavi College of Engg  
 Ibrahimbagh, Hyderabad-31

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

is to certify that the project report entitled "**DESIGN AND ANALYSIS OF SHELL AND TUBE HEAT EXCHANGER FOR AIR HEATING**" is a bonafide record of a project carried out by

NDANAYAKULA KESHAV CHANDRA --- 1602-18-736-020  
RRI LAXMI NARSIMHA REDDY --- 1602-18-736-022  
.ANKE NAVEEN --- 1602-18-736-028

ne Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-2022 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

*C. Gururaja Rao*  
06 June 2022.

*Dr. T. Ramamohan Rao*

**C. GURURAJA RAO**  
Project Guide

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 50

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the project report entitled "**Topology Optimization of Steering Knuckle**" is a bonafide record of a project carried out by

Kadem Bhanu Prakash	1602-18-736-008
Jalli Lakshmi Prashanthi	1602-18-736-021
Earlapally Raju	1602-18-736-032

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

**Ms. S. Kirthana**  
Assistant Professor  
Project Guide

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-501311.

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

Dr T RAMAMOCHAN RAO  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad-31


**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**


This is to certify that the project report entitled  
"Design Optimization of 4-DOF Manipulator" is a  
bonafide record of a project carried out by

V. Sai Harshith	---1602-18-736-035
A. Sumith Chandra	--- 1602-18-736-047
C. Vijay Dev Reddy	--- 1602-18-736-057

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(affiliated to Osmania University), Hyderabad during  
the academic year 2021-22 in partial fulfillment for  
the award of Degree in Bachelor of Mechanical  
Engineering.

  
**Dr./Mr. PVS SUBHASHINI**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD

  
Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-31.

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the project report entitled "**Predictive Maintenance of Coal Mill - 2B Using Vibration Technology**" is a bonafide record of a project carried out by

P. Sai Teja            --- 1602-18-736-037  
B. Santhosh         --- 1602-18-736-039  
E. Suraj Varma     --- 1602-18-736-048

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.



**Mr. T. Krishna Chaitanya**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanic Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the project report entitled "**Performance evaluation of two stage cascade refrigeration cycle using R410A and R507A in HT cycle with R744 in LT cycle**" is a bonafide record of a project carried out by

SHAIK UZEIF	--- 1602-18-736-304
SAIFULLAH KHALID	--- 1602-18-736-038
SAYEED KHAN	--- 1602-18-736-040

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

  
**Dr. S. Venkataiah**

**Associate Professor  
Project Guide**

**Associate Professor  
Mechanical Engineering Dept.  
Vasavi College of Engineering  
Hyderabad-500 031.**

  
**Dr. T. Ramamohan Rao**

**Professor & HOD  
Dept. of Mechanical Engg**

**PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**


This is to certify that the project report entitled  
"Analysis and design of connecting rod and  
production using lost foam casting" is a bonafide  
record of a project carried out by

P Chakradhar Reddy - - - 1602-18-736-009

B Sumanth - - - 1602-18-736-046

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(affiliated to Osmania University), Hyderabad during  
the academic year 2021-22 in partial fulfillment for  
the award of Degree in Bachelor of Mechanical  
Engineering.

Dr.T. Ramamohan Rao  
Project Guide

  
Dr. T. Ramamohan Rao  
Professor & HOD  
Dept. of Mechanical Engg.

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 501 301

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the project report entitled "Design and Analysis of Heat sinks for a Computer Processor" is a bonafide record of a project carried out by

JVS Kaushik --- 1602-18-736-019

Sai Jaswanth Reddy G. --- 1602-18-736-036

Srikar Maddula --- 1602-18-736-045

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

**Mr. N. B. Samba Murthy**  
Project Guide

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-31.

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the project report entitled "**Performance Analysis Of Partial Vaned Diffuser In A Centrifugal Compressor Stage With Different Types Of Vanes**" is a bonafide record of a project carried out by

V.SHIVA SAI KUMAR- - - 1602-18-736-042

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.

Dr.P.Venkateswara Rao

**Project Guide**

Associate Professor  
Mechanical Engineering Dept.  
Vasavi College of Engineering  
Hyderabad-500 031.

Dr. T. Ramamohan Rao

**Professor & H.O.D**

Dept. of Mech. Engg

Dr T RAMAMOHAN RAO  
Professor & HOD

Dept. Of Mechanical Engg  
Vasavi College of Engg.  
Ibrahimbagh, Hyderabad-31

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**VASAVI COLLEGE OF ENGINEERING(AUTONOMOUS)**  
AFFILIATED TO OSMANIA UNIVERSITY  
HYDERABAD

**CERTIFICATE**

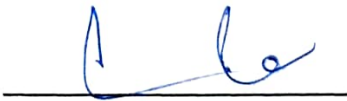
This is to certify that the Major project report entitled  
**"MACHINE LEARNING AIDED CFD ANALYSIS OF FINS  
WITH DIFFERENT NOTCHES"** is a bonafide record of a Major  
project carried out by

Md. Ahmed 1602-18-736-003

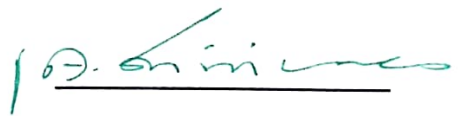
A. Guna Teja 1602-18-736-014

Anil Kumar 1602-18-736-302

in the Department of Mechanical Engineering, Vasavi College  
of Engineering (Autonomous) (Affiliated to Osmania  
University), Hyderabad during the academic year 2021-22.



**Dr. CH V K N S N MOORTHY**  
Professor & Associate Director R&D  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

PROFESSOR  
MECHANICAL ENGINEERING ii  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIM SAHIB, HYDERABAD - 51

PROFESSOR  
MECHANICAL ENGINEERING ii  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIM SAHIB, HYDERABAD - 51

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the project report entitled "**Design and Analysis of Non-Pneumatic Tyre**" is a bonafide record of a project carried out by

Pawar Rohan                      - - - 1602-18-736-034  
Parre Ranadheer                - - - 1602-18-736-033

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.



**Mr. S. Sreekrishna**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-500031

Dr T RAMAMOCHAN RAO  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engineering  
Ibrahimbagh, Hyderabad-500031

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

**CERTIFICATE**

This is to certify that the project report entitled  
“**DESIGN AND ANALYSIS OF MILLING CUTTER TOOL**” is  
a bonafide record of a project carried out by

K.MADHU --- 1602-18-736-024  
K.PAVAN KUMAR --- 1602-18-736-030  
P.VIJAY RAMA RAO --- 1602-18-736-056

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(affiliated to Osmania University), Hyderabad during  
the academic year 2021-2022 in partial fulfillment for  
the award of Degree in Bachelor of Mechanical  
Engineering.

  
Mr.  
**D.GOVINDA RAO**  
ASSISTANT PROFESSOR

  
Dr. T. Ramamohan Rao  
Professor & HOD  
Dept. of mechanical engineering

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the project report entitled "**Design of an Ornithopter**" is a bonafide record of a project carried out by

Guguloth Ganesh - - - 1602-18-736-013  
Sama Tejaswi - - - 1602-18-736-051  
Uppanapelli Sukanya - - - 1602-18-736-306

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment for the award of Degree in Bachelor of Mechanical Engineering.



**Mr. K. ISAAC SPURGEON**

Assistant. Professor, MED.  
Project Guide

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-31.



**Dr. T. Ramamohan Rao**

Professor & HOD  
Dept. of Mechanical Engg.

Dr. T. RAMAMOCHAN RAO  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg.  
Ibrahimbagh, Hyderabad-31

**DEPARTMENT OF MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING,  
(AUTONOMOUS)  
IBRAHIMBAGH, HYDERABAD –500031**

**CERTIFICATE**

This is to certify that the project work entitled “PREPARATION AND ASSESSMENT OF NATURAL FIBER COMPOSITES” is a Bonafide record of a Major project carried out by

T. Amala

1602-18-736-062

R. Prithvi

1602-18-736-084

R. Sandhya Rani

1602-18-736-101

in the Department of Mechanical Engineering, Vasavi college of Engineering (Autonomous), Ibrahim Bagh, Hyderabad-500031, during the academic year of 2021-2022.

Mr. S. Sreekrishna  
Project Guide,  
Assistant Professor,  
Dept. Of Mechanical Engineering.

Dr. T. Ramamohan Rao  
Professor & HOD,  
Dept. Of Mechanical Engineering.

**Vasavi College of Engineering (Autonomous)**

**(Affiliated to Osmania University)**

**Hyderabad-500 031**

**Department of Mechanical Engineering**



**BONAFIDE CERTIFICATE**

This is to certify that the project entitled **MODELING, DESIGNING AND ANALYSIS OF PLASTIC SHREDDER AND IMPLEMENTATION OF PLASTIC SEGREGATION TECHNIQUES** being submitted by

**ANUBHAV CHAND. V**

**1602-18-736-063**

**K GANESH**

**1602-18-736-071**

**P SRIVANI**

**1602-18-736-312**

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Mr. VBS Rajendra Prasad**

**Associate Professor**

**Dept. of Mechanical Engineering**

**Associate Professor**

**Mechanical Engineering Dept.,**

**Vasavi College of Engineering**

**Hyderabad-500 031.**

  
**Dr. T. RAMAMOCHAN RAO**

**Professor & Hod**

**Dept. of**

**Mechanical Engineering**

**Dr T. RAMAMOCHAN RAO**

**Professor & HOD**

**Dept. Of Mechanical Engg**

**Vasavi College of Engg**

**Ibrahimbagh, Hyderabad 500 031**


**VASAVI COLLEGE OF ENGINEERING  
(AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY (OU)  
HYDERABAD**

**CERTIFICATE**

This is to certify that the Project report entitled “**Comparative Analysis of Conventional and Composite Leaf Spring.**” is a bonafide record of a Major Project carried out by

<b>K. Arun</b>	<b>1602-18-736-066</b>
<b>Asif Khan</b>	<b>1602-18-736-081</b>
<b>B. Venkat</b>	<b>1602-18-736-117</b>


In the Department of Mechanical Engineering  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University)  
Hyderabad  
During the academic year 2021-22.



---

**D. Govinda Rao**  
**Assistant Professor**  
**Project Guide**

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-51.



---

**Dr. T. Rammohan rao**  
**Professor & HOD**  
**Dept. of Mechanical Engg.**

Dr T RAMAMOCHAN RAO  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad-51

**Vasavi College of Engineering (Autonomous)**

**(Affiliated to Osmania University)**

**Hyderabad-500 031**

**Department of Computer Science & Engineering**



**BONAFIDE CERTIFICATE**

This is to certify that the project entitled **FABRICATION OF AUTOMATIC WASTE SEGREGATOR MACHINE** being submitted by

**ASJAD ZAHID ANSARI 1602-18-736-067**

**G. HARI RAJA AKASH 1602-18-736-072**

**SYED SAMEERUDDIN 1602-18-736-112**

in partial fulfilment of the requirements for the award of the degree of Bachelor of Engineering in Computer Science & Engineering is a record of bonafide work carried out by him/her under my guidance.

**Mr. V. B. S. Rajendra Prasad,**

**Associate professor**

**Dept. of MECH**

**Associate Professor**

**Mechanical Engineering Dept.,  
Vasavi College of Engineering  
Hyderabad-500 031.**

**Dr. T. ramamohan rao**

**Professor & hod**

**Dept. of MECH,**

**PROFESSOR**

**MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 31**

**Vasavi College of Engineering**  
**(Autonomous) (Affiliated to Osmania**  
**University) Hyderabad-500 031**  
**Department of Mechanical Engineering**



**BONAFIDE CERTIFICATE**

This is to certify that the project entitled **DESIGN AND ANALYSIS**  
**OF VARIOUS AUTOMOTIVE CHASSIS** being submitted by

M. BHARATH	1602-18-736-068
M. DAMODAR PRAHARSH	1602-18-736-070
K. SUPREETH	1602-18-736-111

in the Department of Mechanical Engineering, Vasavi College of  
Engineering (Autonomous) (Affiliated to Osmania University),  
Hyderabad during the academic year 2021-22

**Mr. T. KRISHNA CHAITANYA**

**Project Guide**

**Assistant professor**

**Mechanical Dept. of MECHANICAL**

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-51.

**Dr. T. RAMAMOCHAN RAO**

**Professor & Hod**

**Dept. of**

PROFESSOR  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD - 51

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD.**

**CERTIFICATE**

This is to certify that the Major Project report entitled  
**PERFORMANCE ANALYSIS OF DIESEL ENGINE USING  
COTTONSEED BIODIESEL AS AN ALTERNATIVE FUEL** is a  
bonafide record of a Major

Project carried out by

**Kalyani Durisetti** --- 1602-18-736-076

**Rahul Mogili** --- 1602-18-736-086

**Sunavvar Samreen** --- 1602-16-736-082

In the Department of Mechanical Engineering, Vasavi College of  
Engineering (Autonomous) (Affiliated to Osmania University),  
Hyderabad during the academic year 2021-22 in partial fulfillment of  
the award of degree in Bachelor of Mechanical Engineering.

  
**Mr. Suda Venkateswarulu**

Assistant Professor

Dept. of Mechanical Engg.

  
**Dr. T. Ramamohan Rao**

Professor & HOD,

Dept. of Mechanical Engg.

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-31.

**Dr T RAMAMOHAN RAO**  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad 31

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**  
**AFFILIATED TO OSMANIA UNIVERSITY**  
**IBRAHIMBAGH, HYDERABAD.**

**CERTIFICATE**

This is to certify that the Major Project report entitled "MODELLING AND ANALYSIS OF A 5DOF ROBOTIC ARM" is a bonafide record of a Major

Project carried out by

<b>V. Pravali</b>	--- 1602-18-736-082
<b>R. Ruhi Prasad</b>	--- 1602-18-736-093
<b>V. Sai Aswitha</b>	--- 1602-18-736-310

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22 in partial fulfillment of the award of degree in Bachelor of Mechanical Engineering.

  
**Mr. K. Veladri**

Project Guide.

Associate Professor

Mechanical Engineering Dept.,  
Vasavi College of Engineering  
Hyderabad-500 031.

  
**Dr. T. Ramamohan Rao**

Professor & HOD,

Dept of Mechanical Engineering

Dr T RAMAMOHAN RAO  
Professor  
Dept. Of Mechanical Engineering  
Vasavi College of Engineering  
Ibrahimbagh, Hyderabad

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD.**

**CERTIFICATE**

This is to certify that the project seminar report entitled “EXPERIMENTAL ANALYSIS OF TIG WELDING CHARACTERISTICS OF STAINLESS STEEL-304 & 410” is a bonafide record of a project seminar carried out by

<b>P. PRAVEEN</b>	<b>— 1602-18-736-083</b>
<b>V. RAHULJI</b>	<b>— 1602-18-736-085</b>
<b>N.SHASHI KUMAR</b>	<b>— 1602-18-736-104</b>

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2020-21.

  
**Mr. B. SANDEEP**

Assistant professor

Project Guide. Professor & HOD,

Dept of Mechanical Engg.

  
**Dr. T. Ramamohan Rao**

professor & HOD

**Dr T RAMAMOCHAN RAO**  
Professor & HOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad-31

**Vasavi College of Engineering (Autonomous)**  
**(Affiliated to Osmania University)**  
**Hyderabad-500 031**  
**Department of Mechanical Engineering**



**BONAFIDE CERTIFICATE**

This is to certify that the project entitled **DESIGN AND FABRICATION OF 360 DEGREE FLEXIBLE DRILLING MACHINE** being submitted by

V.RAHUL TEJA 1602-18-736-087

K.SAI RAM 1602-18-736-096

S.SAI KRISHNA 1602-18-736-100

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22

**Mr. K. SRINIVAS RAO**

**Project Guide**

**Associate Professor**

**Dept. of MECHANICAL**

**Dr. T. RAMAMOCHAN RAO**

**Professor & Hod**

**Dept. of MECHANICAL**



## **DEPARTMENT OF MECHANICAL ENGINEERING**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**


**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD**

### **CERTIFICATE**

This is to certify that the Project work entitled “**MANUFACTURING OF A LOW COST AIR PURIFIER**” is being submitted by Sri **S. SRI KRISHNA(1602-18-736-107)**, **P. YESWANTH(1602-18-736-120)**, and **V. RAVINDER (1602-18-736-309)** in partial fulfillment for the award of Bachelor of Engineering in the Department of Mechanical Engineering, Vasavi College of Engineering (Affiliated to Osmania University), Hyderabad during the academic year 2021-22 is a Bonafede work carried out by them under our guidance.

  
**Dr. CH V K N S N Moorthy**  
**Professor, Associate Director R&D**  
**Project Guide**

  
**Dr. T. Rammohan Rao**  
**Head of department**  
**Dept. of Mechanical Engineering**

# VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)

AFFILIATED TO OSMANIAUNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the project report entitled "**Design of kinetic energy recovery system for bicycle**" is a bonafide record of a project carried out by

S. SANDEEP	1602-18-736-307
G. BHANU CHANDER	1602-18-736-308
K. NAGESH	1602-18-736-311

In the **Department of Mechanical Engineering**,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad  
during the academic year 2021-22.

**M. Venugopal Reddy**  
Assistant professor  
Project guide

**Dr.T.Rammohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**Vasavi College of Engineering (Autonomous)**  
**(Affiliated to Osmania University)**

**Hyderabad-500 031**

**Department of Mechanical Engineering**




**BONAFIDE CERTIFICATE**

This is to certify that the project entitled **OPTIMIZATION OF SUPPLY CHAIN USING EMERGING TECHNOLOGIES** being submitted by

N. Rishith Vishwas	1602-18-736-090
T. Sathwik	1602-18-736-102
B. Uttej	1602-18-736-113

in partial fulfilment of the requirements for the award of the degree of Bachelor of Engineering in Mechanical Engineering is a record of Bonafide work carried out by him/her under my guidance.

  
**Mr. K. I. Spurgeon,**  
**Assistant professor**

Assistant Professor  
MECHANICAL ENGINEERING  
VASAVI COLLEGE OF ENGINEERING  
IBRAHIMBAGH, HYDERABAD-500 031.

  
**Dr. T. Ramamohan Rao,**

**Professor & hod.,**  
Dr. T. RAMAMOCHAN RAO  
Professor & MOD  
Dept. Of Mechanical Engg  
Vasavi College of Engg  
Ibrahimbagh, Hyderabad-500 031

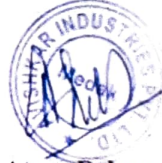
**CERTIFICATE**

This is to certify that Mr. Kaja Karthik of Vasavi College of Engineering, Hyderabad (Mechanical Engineering department) bearing roll number 1602-18-736-018 has successfully completed his industrial project titled ***“Production of Dribble Conveyor”*** as a part of his curriculum with us during the academic year 2021-22. The period of project is 01/02/2022 till 27/05/2022.

**For Avishkar Industries Private Limited**



**Kanak Kabra**  
**Director**



**Ataur Rehman**  
**General Manager &**  
**Project Co-ordinator**

**Date: 31/05/2022**  
**Place: Hyderabad**



(ISO 9001:2015 Certified)

## CERTIFICATE

This is to certify that Mr. Anugu Haricharan of Vasavi College of Engineering, Hyderabad (Mechanical Engineering department) bearing roll number 1602-18-736-015 has successfully completed his industrial project titled "***Production of Dribble Conveyor***" as a part of his curriculum with us during the academic year 2021-22. The period of project is 01/02/2022 till 27/05/2022.

### **For Avishkar Industries Private Limited**



**Kanak Kabra**  
Director



**Ataur Rehman**  
General Manager &  
Project Co-ordinator

**Date: 31/05/2022**

**Place: Hyderabad**

**Regd. Office :**

Survey No. 42/A, Alinagar Hamlet, Chetlapotharam, Gaddapotharam Gram Panchayat, Jinnaram (M),  
Medak Dist. (502 319) Telangana, India.

**Web :** [www.avishkarindustries.com](http://www.avishkarindustries.com) **Email :** [sanjaykabra@avishkarindustries.com](mailto:sanjaykabra@avishkarindustries.com)

**CIN :** U29199TG1982PTC003494 **GSTIN :** 36AAICA7714112H

**CERTIFICATE**

This is to certify that Mr. A V Vipin of Vasavi College of Engineering, Hyderabad (Mechanical Engineering department) bearing roll number 1602-18-736-059 has successfully completed his industrial project titled ***“Production of Dribble Conveyor”*** as a part of his curriculum with us during the academic year 2021-22. The period of project is 01/02/2022 till 27/05/2022.

**For Avishkar Industries Private Limited**



**Kanak Kabra**  
Director



**Ataur Rehman**  
General Manager &  
Project Co-ordinator

**Date: 31/05/2022**

**Place: Hyderabad**

**Regd. Office :**

Survey No. 42/A, Alinagar Hamlet, Chetlapotharam, Gaddapotharam Gram Panchayat, Annaram (M).

Medak Dist. (502 319) Telangana, India

Web : [www.avishkarindustries.com](http://www.avishkarindustries.com) Email : [sanjaykabra@avishkarindustries.com](mailto:sanjaykabra@avishkarindustries.com)

CIN : U29199TG1982PTC003494 GSTIN : 36AAICA7714117H



अनुसंधान केंद्र इमारत  
Research Centre Imarat

(Kalan, Hyderabad)

No: RCI/DRFT/MED/ST/22-1

Date: 31-05-2022

## CERTIFICATE

This is to certify that following students,

1. Ms. M MEGHANA REDDY, ROLL No: 1602-18-736-026 2. Mr. K NISHITH KUMAR, ROLL No: 1602-18-736-029

3. Ms. N PRANANYA YUKTHA, ROLL No: 1602-18-736-031 studying in B. E (4th Year), Department of Mechanical Engineering, Vasavi College of Engineering, Ibrahimbagh, Hyderabad has successfully completed the Major Project on "Design and Analysis of Vibration Fixture of Electronic System" as a partial fulfillment of B. E Mechanical Engineering under the guidance of Mr. Bivin G Mathew (Sc 'C'), RCI, DRDO, HYDERABAD during the period March, 2022 to May, 2022.

Bivin G Mathew  
(Scientist- 'C')

**BIVIN G. MATHEW**

Scientist 'C'

DRFT, RFSSG, RCI, DRDO  
Min. of Def., Hyderabad-  
69.

June 2, 2022

## **CERTIFICATE OF INTERNSHIP**

### **Power Mech Projects Ltd.**

This is to certify that P. Sai Teja bearing Hall Ticket No. 1602-18-736-037 a student of Vasavi College of Engineering, Hyderabad pursuing Bachelor of Engineering 8th Semester, Mechanical Engineering has completed his Internship and Project for a duration of 3 months from 02/02/2022 to 22/05/2022 in Singareni Thermal Power Plant (Operations and Maintenance) department under Power Mech Projects Ltd.

During the said course of Internship, he has been regular and diligent in his work, he has displayed the qualities of willingness to learn and absorb the nature of work. I appreciate him for his contribution and wish him all the best for his future endeavors.

With Regards,



**K. Vijay Kumar**  
**General Manager**

**POWER MECH PROJECTS**



Date: 06.06.2022

Hindustan Aeronautical Ltd

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. M. Raju Nayak (Reg. No.1602-17-736-305) S/o. Shri. M. Balya Nayak, VASAVI COLLEGE OF ENGINEERING, Hyderabad has undergone internship programme from 21-03-2022 to 06-06-2022. During the period he also undergone Project work titled "STUDY OF CNC MACHINING AND MANUFACTURING OF AVIONICS MOUNTING BRACKET" at Hindustan Aeronautical Ltd., PO: Balanagar, Hyderabad-500037.

The conduct during his stay at HAL was found to be VERY GOOD

Hindustan Aeronautical Ltd

For, Shri. D. Venkat Swamy

CM/MFG (Project Guide)

डी.वेंकट स्वामी / D. VENKATA SWAMY  
एम.ई.डी. / CM (MFG)  
20220606 / EID - 1003603  
एअर डी. एच.एल. लि. (इंटरनेट)



## CERTIFICATE

This is to certify that the following students of Vasavi College Of Engineering, Ibrahim Bagh, Hyderabad, Telangana;

P. Bhuvan Kalyan	1602-17-736-008
M. Shiva Sai	1602-17-736-042
K. Anand Prasad	1602-17-736-065

Have completed their Project based internship from “DYNAMIC RYDERZ”.  
(Internship/Training Period : 15.03.2022 to 27.05.2022)

The project report titled “**Performance Tuning and Dynamometer Testing**” is a record of bonafied work carried out by them under the guidance of K. Varun Naidu, Proprietor of Dynamic Ryderz.

The project work is done by them in the partial fulfillment for the award of degree of bachelor of technology in **MECHANICAL ENGINEERING** by the Vasavi College Of Engineering, Affiliated to Osmania University, Hyderabad, Year-2022.

For **DYNAMIC RYDERZ**

Proprietor

Director

Dynamic Ryderz, Rd No 10, Jubilee Hills, Hyderabad, Telangana-500045,  
e-mail: [sales@dynamicryderz.store](mailto:sales@dynamicryderz.store) [www.dynamicryderz.com](http://www.dynamicryderz.com)  
GST: 36BZMPK2229M1ZY



## CERTIFICATE

This is to certify that the following students of Vasavi College Of Engineering, Ibrahim Bagh, Hyderabad, Telangana;

P. Bhuvan Kalyan	1602-17-736-008
M. Shiva Sai	1602-17-736-042
K. Anand Prasad	1602-17-736-065

Have completed their Project based internship from “DYNAMIC RYDERZ”.  
(Internship/Training Period : 15.03.2022 to 27.05.2022)

The project report titled “**Performance Tuning and Dynamometer Testing**” is a record of bonafied work carried out by them under the guidance of K. Varun Naidu, Proprietor of Dynamic Ryderz.

The project work is done by them in the partial fulfillment for the award of degree of bachelor of technology in **MECHANICAL ENGINEERING** by the Vasavi College Of Engineering, Affiliated to Osmania University, Hyderabad, Year-2022.

For **DYNAMIC RYDERZ**

Proprietor

Director

Dynamic Ryderz, Rd No 10, Jubilee Hills, Hyderabad, Telangana-500045,  
e-mail: [sales@dynamicryderz.store](mailto:sales@dynamicryderz.store) [www.dynamicryderz.com](http://www.dynamicryderz.com)  
GST: 36BZMPK2229M1ZY

# CERTIFICATE

## CENERG GLOBAL TOOLS PVT.LTD

This is to certify that 1. T. Sreekar Sai Pavan bearing with Hall Ticket.No 1602-18-736-044, 2. A. Uday Kiran bearing with Hall Ticket.No 1602-18-736-053 and 3. M. Uday Kiran Reddy bearing with Hall Ticket.No 1602-18-736-054 students of VASAVI COLLEGE OF ENGINEERING, Hyderabad pursuing Bachelor Of Engineering 8<sup>th</sup> semester have completed Internship and Project for 3 months from 07-03-2022 to 31-05-2022 in the Heat Treatment Department in CENERG GLOBAL TOOLS PVT. Ltd Pashamylaram, Medak (District).



**Mr. M. AJAY SUBBA RAO**

**CERTIFICATE**

This is to certify that Mr. Devi Shashank of Vasavi College of Engineering, Hyderabad (Mechanical Engineering department) bearing roll number 1602-18-736-041 has successfully completed his industrial project titled ***“Production of Water Mixer Drum”*** as a part of his curriculum with us during the academic year 2021-22. The period of project is 01/02/2022 till 27/05/2022.

**For Avishkar Industries Private Limited**

  
**Kanak-Kabra**  
Director

  
**Ataur Rehman**  
General Manager &  
Project Co-ordinator

**Date: 31/05/2022**  
**Place: Hyderabad**

**Regd. Office :**

Survey No. 42/A, Alinagar Hamlet, Chetlapotharam, Gaddapotharam Gram Panchayst, Jinnaram (M), Medak Dist. (502 319) Telangana, India.

**Web :** [www.avishkarindustries.com](http://www.avishkarindustries.com) **Email :** [sanjaykabra@avishkarindustries.com](mailto:sanjaykabra@avishkarindustries.com)

**CIN :** U29199TG1982PTC003494 **GSTIN :** 36AAICA7714J1ZH

**CERTIFICATE**

This is to certify that Mr. Koppu Abhiram of Vasavi College of Engineering, Hyderabad (Mechanical Engineering department) bearing roll number 1602-18-736-002 has successfully completed his industrial project titled "***Production of Water Mixer Drum***" as a part of his curriculum with us during the academic year 2021-22. The period of project is 01/02/2022 to 27/05/2022.

**For Avishkar Industries Private Limited**



**Kanak Kabra**  
**Director**



**Ataur Rehman**  
**General Manager &**  
**Project Co-ordinator**

**Date: 31/05/2022**

**Place: Hyderabad**

**Regd. Office :**

Survey No. 42/A, Alinagar Hamlet, Chetlapotharam, Gaddapotharam Gram Panchayat, Jinnaram (M),  
Medak Dist. (502 319) Telangana, India.

**Web :** www.avishkarindustries.com **Email :** sanjaykabra@avishkarindustries.com

**CIN :** U29199TG1982PTC003494 **GSTIN :** 36AAICA7714J1ZH



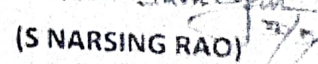
MDN/ADMIN/TRG/WPRJ/03/2021 22  
Date: 30.05.2022

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. K TEJ NIKHIL KANTH (Reg. No. 160218736305) S/o Shri K RAVI KANTH, a B.E IV<sup>th</sup> Year, 8<sup>th</sup> Semester, student of **MECHANICAL ENGINEERING, VASAVI COLLEGE OF ENGINEERING, Hyderabad** has undergone internship programme from 10-02-2022 to 10.05.2022. During the period he also undergone Project work titled "**DESIGN AND ANALYSIS OF MANIPULATOR TONGS**" at MISHRA DHATU NIGAM LIMITED, PO: Kanchanbagh, Hyderabad - 500 058.

***The conduct during his stay at MIDHANI was found to be VERY GOOD***

For Mishra Dhatu Nigam Ltd

  
FOR, (S NARSING RAO)  
Addl. Gen. Manager (ADMIN)

एस. नरसिंग राव / S.Narsinga Rao  
अपर महाप्रबन्धक (प्रशासन एवं सि.जी.डी.)  
Addl. General Manager (Admin. & CGS)  
Mishra Dhatu Nigam Limited, Kanchanbagh, Hyderabad - 500 058

Tele Phone: 040 2418 4508

Email: [training.dept@midhani-india.in](mailto:training.dept@midhani-india.in)

मिश्र धातु निगम लिमिटेड

MISHRA DHATU NIGAM LIMITED

(भारत सरकार का उद्यम)

(A Govt. of India Enterprise)

पंजीकृत कार्यालय: पी.ओ. कंचनबाग, हैदराबाद, तेलंगाना - 500058

Registered Office: P.O. Kanchanbagh, Hyderabad, Telangana - 500058

फोन Telephone: 040-24184000, फैक्स Fax: 040-24340030

निर्वाणत पहचान सं. CIN: L14202TG1973G01001600

वेबसाइट Website: [www.midhani-india.in](http://www.midhani-india.in)

31<sup>st</sup> May 2022


**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that, **Mr. Anirudh Lakkundi**, from **Vasavi College of Engineering**, has completed his Internship project work on '**Cycle Time Study Of M4A Line And Identifying Opportunity For Productivity Improvement**'. During his project he was designated as a Trainee in **Vitesco Technologies India Pvt Ltd** from **1<sup>st</sup> March 2022 to 31<sup>st</sup> May 2022**.

During the period of his internship program, we found him punctual, hardworking and keen learner.

We take this opportunity to wish him good luck in his further career.

Yours sincerely,



**Ms. Suchita Chavan.**  
**Asst. Manager HR**  
**Vitesco Technologies India Pvt Ltd**



# Certificates From BDL

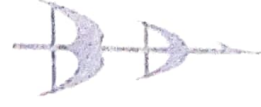
भारत डायनामिक्स लिमिटेड

भारत सरकार का उद्योग २४० पंचसलय  
भानूर (टी.बी.) जिला संगारेडी 502305  
तेलंगाणा, भारत

**Bharat Dynamics Limited**

A Government of India Enterprise, Ministry of Defence  
Bhanur, (T.B.) Sangareddy District, Andhra Pradesh, India

विशेष पहचान संख्या Corporate Identity Number : I 2429216-19706-01001354  
Website: <http://www.isdl.india.in>



NET GE A513200  
& ISO 9001:2015  
Certificate No. 1890893

ISO 9001:2015  
Certificate No. 1890893

मा.सं-अधि एवं वि. विभाग

HR-L&D DEPARTMENT

संदर्भ Ref: बीडीएलBDL/6081/01/परि.का.Project Work/24/61/2022-23

## प्रमाण पत्र CERTIFICATE

### TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that Mr./Ms. AKSHITH T, ROLL NO: 1602-18-736-061 B.E (MECHANICAL) student of VASAVI COLLEGE OF ENGINEERING, IBRAHIMBAGH, HYDERABAD " has successfully completed the project work title "DEVELOPMENT OF PART PROGRAM FOR MANUFACTURING THE COMPONENT 'I.C.BODY' ON A CNC MILLING MACHINE" in the area of B.E. (MECHANICAL) from 16.02.2022 to 15.05.2022 in our Organization.

कृते भारत डायनामिक्स लिमिटेड  
for BHARAT DYNAMICS LIMITED

(बी सिद्धिरामुलु B.SIDDIRAMULU)  
उ .अ.शि.-सं.मा).प्र.प्रशि.(एवं वि .अधि .  
DY. MGR (HR-App.Acq,I,L&D

दि.Date : 16.05.2022

स्थान Place: बीडीएल भानूर BDL Bhanur,

संगारेड्डी Sangareddy

दूरभाष Telephone : (91) (040)23469125,195

पंजीकृत कार्यालय कंचनबाग, हैदराबाद- 500 058.

फैक्स /Telefax : (91) (040) -23469552/554

Regd. Office: Kanchanbagh Hyderabad – 500 058

भारत डायनामिक्स लिमिटेड

भारत सरकार का निदेशक रक्षा मंत्रालय

एन.डी.सी.डी.ए. बंधनूरी 502315

बिहार, भारत।

**Bharat Dynamics Limited**

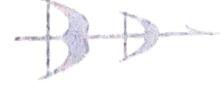
A Public Limited Company in India

INCORPORATED IN INDIA

Company No. 1111

Registered Office: Corporate Bhawan Number: 111129211, 1111111111

Website: <http://www.bdl.co.in>



NOT REGISTERED  
AS A PUBLIC COMPANY  
IN THE STATE OF INDIA

मा.सं-अधि एवं वि. विभाग

**HR-L&D DEPARTMENT**

संदर्भ Ref: बीडीएलBDL/6081/01/परि.क.ज. Project Work/24/59/2022-23

## प्रमाण पत्र CERTIFICATE

### TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that Mr./Ms. ANUDEEP SAI. B, ROLL NO:1602-18-736-064 B.E (MECHANICAL) student of VASAVI COLLEGE OF ENGINEERING, IBRAHIMBAGH, HYDERABAD " has successfully completed the project work title "DEVELOPMENT OF PART PROGRAM FOR MANUFACTURING THE COMPONENT 'I.C.BODY' ON A CNC MILLING MACHINE" in the area of B.E. (MECHANICAL) from 16.02.2022 to 15.05.2022 in our Organization.

कृते भारत डायनामिक्स लिमिटेड  
for BHARAT DYNAMICS LIMITED

*B.Siddiramulu*

(बी सिद्धिरामुलु B.SIDDIRAMULU)

उ.अ.सि.-सं.मा.प्र.प्रशि.(एवं वि.अधि.)  
DY. MGR (HR-App.Acq,I,L&D)

दि. Date : 16.05. 2022

स्थान Place: बीडीएल भानूर BDL Bhanur,

संगारेड्डी Sangareddy

दूरभाष Telephone : (91) (040)23469125,195

पंजीकृत कार्यालय कंचनबाग, हैदराबाद- 500 058.

फैक्स Telefax : (91) (040) -23469552/554

Regd. Office: Kanchanbagh Hyderabad – 500 058

भारत डायनामिक्स लिमिटेड

(भारत सरकार का उपक्रम) स्वी. सं. १२७२७

संगारि (वी.आ.) डिस्ट. संगारि-१, ५०२२०५

उत्तरांचल, भारत

**Bharat Dynamics Limited**

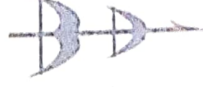
(A Government of India Enterprise) Ministry of Defence

Head Office: (PO) Sangar, U.P. Dist. - 201205

India

विभागीय संख्या/Corporate Identity Number : I-242921G/9706/0100139

Website: <http://www.bdlindia.in>



ISO 9001:2015  
CERTIFICATE No. 1800491

www.bdlindia.in

मा.सं-अधि एवं वि. विभाग

**HR-L&D DEPARTMENT**

संदर्भ Ref: बीडीएलBDL/6081/01/परि.का.Project Work/24/60/2022-23

## प्रमाण पत्र CERTIFICATE

### TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that Mr./Ms. **ARAVIND A**, ROLL NO: **1602-18-736-065 B.E (MECHANICAL)** student of **VASAVI COLLEGE OF ENGINEERING, IBRAHIMBAGH, HYDERABAD** has successfully completed the project work title **"DEVELOPMENT OF PART PROGRAM FOR MANUFACTURING THE COMPONENT 'I.C.BODY' ON A CNC MILLING MACHINE"** in the area of **B.E. (MECHANICAL)** from **16.02.2022** to **15.05.2022** in our Organization.

कृते भारत डायनामिक्स लिमिटेड  
for BHARAT DYNAMICS LIMITED

(बी सिद्धिरामुलु B.SIDDIRAMULU)  
उ.अ.शि.-सं.मा.प्र.प्रशि.(एवं वि.अधि)  
DY. MGR (HR-App.Acq,I,L&D)

दि.Date : 16.05.2022

स्थान Place: बीडीएल भानूर BDL Bhanur,

संगारिडुडी Sangareddy

दुम्पार Telephone : (91) (040)23469125,195

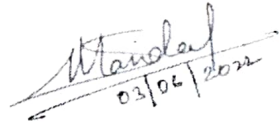
पंजीकृत कार्यालय कंचनबाग, हैदराबाद- 500 058.

फैक्स /Telefax : (91) (040) -23469552/554

Regd. Office: Kanchanbagh Hyderabad – 500 058

## CERTIFICATE

Certified that this is a bona fide record of the dissertation work entitled “**DESIGN ASPECTS OF BULK MATERIAL STORAGE SILOS**” done by **K. Harsha Vardhan Rao** (1602-18-736-073), **D. Karthik** (1602-18-736-077) and **T. Krishna Chaitanya** (1602-18-736-078) in partial fulfillment of the requirement for the award of the degree of Bachelor of Engineering with specialization in Mechanical Engineering from Vasavi College Of Engineering (Autonomous), Hyderabad.



03/06/2022

Signature of External Guide  
Somiran Mandal  
Sr. Manager (Mineral Processing)  
NMDC R&D Centre  
Hyderabad



R. Gopikrishna, Sc-'D'


Govt. of India  
Ministry of Defence  
DEFENCE RESEARCH & DEV. ORGN.  
DEFENCE RESEARCH & DEV. LABORATORY  
PO: KANCHANBAGH  
HYDERABAD – 500 058  
Ph. 040-24583796 Fax No.040-24584587

Date: 02<sup>nd</sup> June, 2022

### CERTIFICATE

This is to certify that the project work titled "DESIGN OF PROLATE ELLIPSOIDAL DOME FOR UNDERWATER MISSILE APPLICATIONS", submitted by Hrushikesh Mathi, Roll No. 1602-18-736-074, student of Vasavi Collage of Engineering, Hyderabad in partial fulfillment of the requirement for the award of Bachelor of Technology in Department of Mechanical Engineering during the academic year 2018-2022, is a record of the bonafide work carried out by him at Structural Test Facility, Defence Research and Development Laboratory of DRDO, Kanchanbagh, Hyderabad during the period from 01<sup>st</sup> February to 31<sup>st</sup> May, 2022. His attendance, conduct and performance during this period were excellent.

Project Guide

  
(R. GOPIKRISHNA)  
Scientist 'D'  
STF, T&SG,  
DRDL, Hyderabad

R. GOPIKRISHNA  
S. 10111  
DRDL, DRDO, Min. of Defence  
Kanchanbagh, Hyderabad-500058



Govt. of India  
Ministry of Defence  
DEFENCE RESEARCH & DEV. ORGN.  
DEFENCE RESEARCH & DEV. LABORATORY  
PO: KANCHANBAGH  
HYDERABAD - 500 058  
Ph. 040-24583796 Fax No.040-24584587

R. Gopikrishna, Sc-'D'

Date: 02<sup>nd</sup> June, 2022

**CERTIFICATE**

This is to certify that the project work titled "DESIGN OF PROLATE ELLIPSOIDAL DOME FOR UNDERWATER MISSILE APPLICATIONS", submitted by B.V.S Manish Gupta, Roll No. 1602-18-736-079, student of Vasavi Collage of Engineering, Hyderabad in partial fulfillment of the requirement for the award of Bachelor of Technology in Department of Mechanical Engineering during the academic year 2018-2022, is a record of the bonafide work carried out by him at Structural Test Facility, Defence Research and Development Laboratory of DRDO, Kanchanbagh, Hyderabad during the period from 01<sup>st</sup> February to 31<sup>st</sup> May, 2022. His attendance, conduct and performance during this period were excellent.

Project Guide

(R. GOPIKRISHNA)  
Scientist 'D'  
STF, T&SG,  
DRDL, Hyderabad

R. GOPIKRISHNA  
Scientist  
DRDL, DRDO, Min. of Defence  
Kanchanbagh, Hyderabad-50



# BUDHAN ENGINEERINGS PVT. LTD

MANUFACTURERS & EXPORTERS OF TOBACCO MACHINERY

Plot No. 30/A, IDA Balanagar, Hyderabad - 500037, T.S. INDIA

www.budhan.com, E-mail : budhanenggs@yahoo.co.in, info@budhan.com

Date: 01-06-2022

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. THOTA RANAGANAYAKULU** bearing Roll No: **(1602-18-736-089)**, student of Vasavi College of Engineering, Ibrahimpatnam, Hyderabad, pursuing the degree of (B.E) in Mechanical Engineering, successfully completed the Internship Project on "**Design and Fabrication of Barrel Cam Assembly for Cigarette Packing Machine**" under the guidance of our senior design engineer, Mr. S.P.R. BALA MURUGAN during the period from 7th February 2022 to 1st June 2022.

During the internship he demonstrated good design skills with a self-motivated attitude to learn new things. The student was sincere, hardworking, and showed a keen interest in learning during the training. The involvement and the sustained efforts put by the student are highly appreciable. His performance exceeded expectations and was able to complete the project successfully on time.

We wish him all the best in his future endeavours.

For Budhan Engineerings Pvt Ltd.

  
N. Sunil Kumar  
HR Manager





# BUDHAN ENGINEERINGS PVT. LTD

MANUFACTURERS & EXPORTERS OF TOBACCO MACHINERY

Plot No. 30/A, IDA Balanagar, Hyderabad - 500037, T.S. INDIA

www.budhan.com, E-mail : budhanenggs@yahoo.co.in, info@budhan.com

Date: 01-06-2022

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. R V VAIBHAV GOPAL** bearing Roll No: **(1602-18-736-114)**, student of Vasavi College of Engineering, Ibrahimpatnam, Hyderabad, pursuing the degree of (B.E) in Mechanical Engineering, successfully completed the Internship Project on "**Design and Fabrication of Barrel Cam Assembly for Cigarette Packing Machine**" under the guidance of our senior design engineer, **Mr. S.P.R. BALA MURUGAN** during the period from 7th February 2022 to 1st June 2022.

During the internship he demonstrated good design skills with a self-motivated attitude to learn new things. The student was sincere, hardworking, and showed a keen interest in learning during the training. The involvement and the sustained efforts put by the student are highly appreciable. His performance exceeded expectations and was able to complete the project successfully on time.

We wish him all the best in his future endeavours.

For Budhan Engineerings Pvt Ltd.

  
N. Sunil Kumar  
HR Manager





# BUDHAN ENGINEERINGS PVT. LTD

MANUFACTURERS & EXPORTERS OF TOBACCO MACHINERY

Plot No. 30/A, IDA Balanagar, Hyderabad - 500037, T.S. INDIA

www.budhan.com, E-mail : budhanenggs@yahoo.co.in, info@budhan.com

Date: 01-06-2022

## TO WHOMSOEVER IT MAY CONCERN

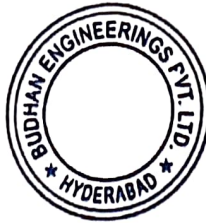
This is to certify that Mr. **GOWLIKAR VISHAL** bearing Roll No: **(1602-18-736-119)**, student of Vasavi College of Engineering, Ibrahimpatnam, Hyderabad, pursuing the degree of (B.E) in Mechanical Engineering, successfully completed the Internship Project on "**Design and Fabrication of Barrel Cam Assembly for Cigarette Packing Machine**" under the guidance of our senior design engineer, Mr. S.P.R. BALA MURUGAN during the period from 7th February 2022 to 1st June 2022.

During the internship he demonstrated good design skills with a self-motivated attitude to learn new things. The student was sincere, hardworking, and showed a keen interest in learning during the training. The involvement and the sustained efforts put by the student are highly appreciable. His performance exceeded expectations and was able to complete the project successfully on time.

We wish him all the best in his future endeavours.

For Budhan Engineerings Pvt Ltd.

  
N. Sunil Kumar  
HR Manager



# INDUSTRY CERTIFICATE



Ref: TSAL/22-23/INT-455

Date: 30-04-2022

**TO WHOMSOEVER IT MAY CONCERN**

**Internship Completion Letter**

This is to certify that Mr. Sai Sarthak Manusani has successfully completed his Internship in Manufacturing Engineering Department at TATA Sikorsky Aerospace Limited, Hyderabad from 31<sup>st</sup> January, 2022 to 30<sup>th</sup> April, 2022

We appreciate his valuable contribution and wish him all the very best in his future endeavours.

For TATA Sikorsky Aerospace Limited,



**TATA SIKORSKY AEROSPACE LIMITED**

(Formerly known as TARA Aerospace Systems Limited)

Sy No: 255 Adibatla (V) Brahmapotnam (M) Bangareddy (D) Telangana - 501 510

Registered Office : Harejasa Park, Plot No 21, 1<sup>st</sup> Phase, Laxmi Narayana, Ravipeta (V), Maheshwaram (M), Hyderabad - 501210

Std. 91 40 6644 8230 Fax 91 40 6644 8242 Email: [email@tataadvancedsystems.com](mailto:email@tataadvancedsystems.com) Website: [www.tataadvancedsystems.com](http://www.tataadvancedsystems.com) CIN: U74900TG1000PLC027900



भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad

भारतीय प्रौद्योगिकी संस्थान हैदराबाद

कैंडी - ५०२ २८५, सांगरेड्डी, तेलंगाण, भारत  
फोन : (०४०) २३०१ ६०३३; फेक्स : (०४०) ६००३ / ३२

Indian Institute of Technology Hyderabad

Kandi - 502 285, Sangareddy, Telangana, INDIA  
Phone: (040) 2301 6033; Fax: (040) 2301 6003 /32

Dt: 7<sup>th</sup> June 2022

## CERTIFICATE

This is to certify that the following three students from Vasavi College of Engineering of Semester-VIII have completed their Internship as a part of their 4<sup>th</sup> year Major Project on CRDI engine with topic as "Performance and emission of a CRDI engine with pilot injection" at lab 16 of IIT Hyderabad, Kandi, Sangareddy District, Telangana from March 2022 to the beginning of June 2022 for a period of three months.

1. Ms. Shaik Ruksana -- 1602-18-736-103
2. Mr. P. K. Sriram -- 1602-18-736-108
3. Ms. Kavati Srinidhi -- 1602-18-736-110

During this period, they visited IC Engines research laboratory and conducted experiments on common rail direct injection (CRDI) engine under the guidance of Dr.J.Anjaneyulu (internal guide) Vasavi Collage of Engineering and Dr.K.Venkateswarlu (external guide).

Dr. Pankaj Sharadchandra Kolhe  
Associate Professor, Academic Block C#404,  
Mechanical and Aerospace Engineering,  
IIT Hyderabad, Kandi, Sangareddy 502285.  
Telangana India.  
Contact: 091-4023016665 (O); 091-8333830942 (M)



Govt. of India  
 Ministry of Defence  
 DEFENCE RESEARCH & DEV. ORGN.  
 DEFENCE RESEARCH & DEV.  
 LABORATORY  
 PO: KANCHANBAGH  
 HYDERABAD – 500 058  
 Ph. 040-2458 3495  
 Fax No.040-2434 7016

Letter No. DRDL/DHRTM/HRD/INTERNSHIP/2022

Date: 30/05/2022

CERTIFICATE

This is to certify that **Shri V SHIVARAM** (Roll No. 1602-18-736-105) B.E student of **Mechanical Engineering**, of **Vasavi College of Engineering, Hyderabad**, successfully carried out Internship / Project on **“Optimization of Process Parameters on Hybrid Micro-ECDM using Regression Analysis”** during the period from 08<sup>th</sup> February 2022 to 30<sup>th</sup> May 2022 at Defence Research and Development Laboratory, Hyderabad under guidance of **Shri Niladri Mandal, Sc‘F’, DOE.**

During this industrial training period from **08-02-2022 to 30-05-2022**, he was found to be sincere & hard working.

Project Work carried out in DRDL, Hyderabad is a part of academic curriculum and cannot be claimed as experience.

(Shri S JEEVAN BABU)  
 Scientist ‘F’  
 Head, HRD  
 DHRTM, DRDL

(NILADRI MANDAL)  
 Scientist ‘F’  
 Head PDD  
 DOE, DRDL

**S. JEEVAN BABU**  
 Sc-F, HEAD HRD/DHR&TM  
 Defence Res. & Dev. Laboratory  
 Kanchanbagh PO, Hyderabad-58  
 For DIRECTOR



**BIHARAT DYNAMICS LIMITED**  
**KANCHANBAGH, HYDERABAD**  
Institute of Systems Technology & Management

Ref. No. BDL/0183/HRD -- App. & Trgs.

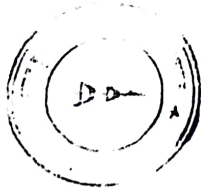
DT: 06/06/2022

**TO WHOM-SO-EVER IT MAY CONCERN**

This is to affirm that Mr./Ms. PRANAV VEMPATI (1602-18-736-106), B. VEMAN REDDY (1602-18-736-116), G.VIKRAM (1602-18-736-118), B.E (MECHANICAL) students of "VASAVI COLLEGE OF ENGINEERING, IBRAHIMBAGH, HYDERABAD" has successfully completed the project work title "THRUST AUGMENTATION OF EXPANDER CYCLE ROCKET ENGINE USING EJECTOR" in the area of B.E. (MECHANICAL) from March 2022 to June 2022 under the guidance of Mr. SWAPNIL SAPKALE (D.M, CAD-D&E) in our Organization.

This is for your kind information please.

Thanking you,



Yours faithfully,  
 for BIHARAT DYNAMICS LIMITED.

(M) N. MALLIKARJUNA SWAMY  
 Mgr (HR) App. Trgs & Legal

एन मल्लिकार्जुन स्वामी  
 N MALLIKARJUNA SWAMY  
 प्रबन्धक (म.प्र.) विभिन्न प्रशासन एवं विधि  
 Manager (HR) APP TRG & LEGAL

**Excel**



# Radio Frequency Technologies (P) Ltd.

---

Date: -30.05.2022

## CERTIFICATE

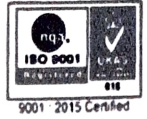
This is to certify that the Mr. BACHU ROHITH bearing Roll No: (1602-18-736-091) a student of VASAVI COLLEGE OF ENGINEERING, Ibrahimpatnam, Hyderabad pursuing the degree of (B.E) in Mechanical Engineering has undergone Project work/ Internship titled "Design and Analysis of TC Antenna Element" under our guidance during the period from 01-03-2022 to 30-05-2022 in partial fulfilment of the requirements for the award of the above-mentioned degree. The above student is punctual, hardworking and shown keen interest to learn about the project.

We wish them good luck for their future endeavors.

For Excel Radio Frequency Technologies Pvt Ltd

  
Authorized Signatory





**Excel**



**Radio Frequency Technologies (P) Ltd.**

Date: -30.05.2022

## CERTIFICATE

This is to certify that the Mr. AERVA ROSHAN REDDY bearing Roll No: (1602-18-736-092) a student of VASAVI COLLEGE OF ENGINEERING, Ibrahimpatnam, Hyderabad pursuing the degree of (B.E) in Mechanical Engineering has undergone Project work/ Internship titled "Design and Analysis of TC Antenna Element" under our guidance during the period from 01-03-2022 to 30-05-2022 in partial fulfilment of the requirements for the award of the above-mentioned degree. The above student is punctual, hardworking and shown keen interest to learn about the project.

We wish them good luck for their future endeavors.

For Excel Radio Frequency Technologies Pvt Ltd

Authorized Signatory





**Excel**

**Radio Frequency Technologies (P) Ltd.**

Date: -30.05.2022

## CERTIFICATE

This is to certify that the Mr. PAPUDESU SAI RITHVIK bearing Roll No: (1602-18-736-097) a student of VASAVI COLLEGE OF ENGINEERING, Ibrahimpatnam, Hyderabad pursuing the degree of (B.E) in Mechanical Engineering has undergone Project work/ Internship titled "Design and Analysis of TC Antenna Element" under our guidance during the period from 01-03-2022 to 30-05-2022 in partial fulfilment of the requirements for the award of the above-mentioned degree. The above student is punctual, hardworking and shown keen interest to learn about the project.

We wish them good luck for their future endeavors.

For Excel Radio Frequency Technologies Pvt Ltd

  
Authorized Signatory



**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

**CERTIFICATE**


This is to certify that the Theme based project report entitled "Optimization of Production Cost using Linear Programming techniques" is a bonafide record of a Theme based project work carried out by

Abishai P --- 1602-19-736-001

Akhil R --- 1602-19-736-004

Manjunath U --- 1602-19-736-017

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr.P.V.S. Subhashini**

**(Project Guide)**



**Dr. T. Ramamohan Rao**

**(Professor & HOD)**

**Dept. of Mechanical Engg.**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "***Design, Analysis and Fabrication of Involute Spur Gears.***" is a bonafide record of a Theme based project work carried out by

**G Agastya Sravan** 1602-19-736-002

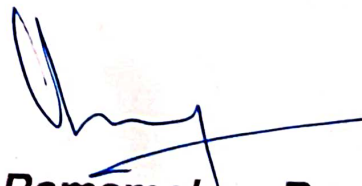
**K Chandra Kiran** 1602-19-736-009

**M Divya** 1602-19-736-011

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



**Mr. B Sandeep**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled "Simulation studies on conducting - convecting straight circular fins using finite difference method" is a bonafide record of a Theme based project work carried out by

M. Akash Varma - - - 1602-19-736-003

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.

*Gururaj* <sup>11</sup>  
30 May 2022.

**Dr. C. Gururaja Rao**  
Professor  
Dept. of Mechanical Engg.  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

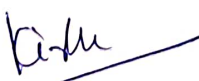
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**


## **CERTIFICATE**

This is to certify that the Theme based project report entitle "ENCHANCING THE SPEED OF DRILLING MACHINE" is a bonafide record of a Theme based project work carried out by

K.MOUNIKA	--- 1602-19-736-019
P.AMRUTH	--- 1602-19-736-005
T.ANURAAGH	--- 1602-19-736-006

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Dr./Mr. K. Kishore**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "Design of a Two-Wheel Self Balanced vehicle Using Gyroscope" is a bonafide record of a Theme based project work carried out by

M. Arjun	1602-19-736-007
B. Harith	1602-19-736-012

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Dr. J. Anjaneyulu**

Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIAUNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

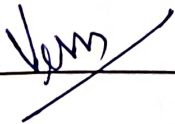
This is to certify that the Theme based project report entitled "DESIGN AND FABRICATION OF A DEVICE FOR POWER GENERATION USING MOTOR SUSPENSION MECHANISM" is a bonafide record of a Theme based project work carried out by

D.Lavakushareddy - - - 1602-19-736-010

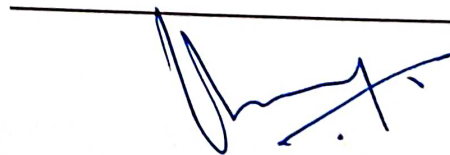
K.Karthiukkumar - - - 1602-19-736-014

B.Manideep - - - 1602-19-736-016

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



**Mr.M.VENUGOPAL REDDY**  
**Project Guide**



**DR.T.RAMMOHAN RAO**

**Professor & HOD**

**Dept. of Mechanical Engg.**

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled *Design and modelling of chainless bike* is a bonafide record of a Theme based project work carried out by

N. Harshita Kruthi 1602-19-736-013

E. Mannolasini 1602-19-736-018

E. Niharika 1602-19-736-020

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
Dr. J. Anjaneyulu

Project Guide

  
Dr. T. Ramamohan Rao

Professor & HOD

Dept. of Mechanical Engg.

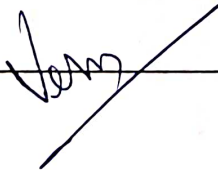
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

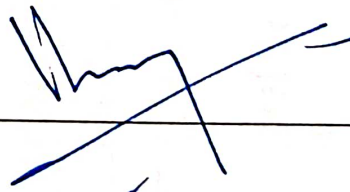
This is to certify that the Theme based project report entitled "**DESIGN OF MECHANICAL SEAL UNDER THE WATER APPLICATION (CENTRIFUGAL PUMP)**" is a bonafide record of a Theme based project work carried out by

BHANU PRASAD --- 1602-19-736-008  
KRISHNA VAMSI --- 1602-19-736-015  
NITHYA SRI --- 1602-19-736-022

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



*Dr./Mr. Venu Gopal Reddy Sir*  
Project Guide



*Dr. T. Ramamohan Rao Sir*  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**THERMAL AND VIBRATIONAL ANALYSIS OF TWO-WHEELER DISC BRAKE MOTOR**" is a bonafide record of a Theme based project work carried out by

K. PARTHAV REDDY	1602-19-736-023
P. SAKETH REDDY	1602-19-736-037
T. SATHWIK RAJA	1602-19-736-040

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



---

**Mr. VENU GOPAL REDDY**  
Project Guide



---

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

HYDERABAD, May 2022.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

**CERTIFICATE**

**This is to certify that the Theme based project report entitled "Working of a Centrifugal Pump Using Solar Energy, Applied with Azimuth Sensor and Pyranometer" is a bonafide record of a Theme based project work carried out by**

Pooja Jadhav --- 1602-19-736-024

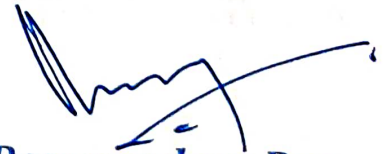
Pranav Chowdary --- 1602-19-736-026

Preetham Dugyala --- 1602-19-736-027

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. T. Krishna Chaitanya**  
**Assistant Professor**  
**Project Guide**



**Dr. T. Ramamohan Rao**  
**Professor &HOD**  
**Dept. of Mechanical Engg**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**DESIGN AND MODELLING OF WIND TURBINE ROTOR TO GENERATE ELECTRICITY**" is a bonafide record of a Theme based project work carried out by

M. POOJITH REDDY	1602-19-736-025
B. SAI PRABHATH	1602-19-736-034
BADRINATH.S	1602-19-736-043

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. Mohammad Luqman Dr. T. Ramamohan Rao**

Project Guide



Professor & HOD  
Dept. of Mechanical Engg

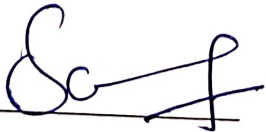
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled "**BALANCING INVERETD PENDULUM USING SIMULATION**" is a bonafide record of a Theme based project work carried out by

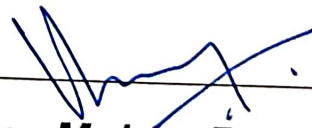
S. SHAHADHIL      --- 1602-19-736-044  
Y. SAI KIRAN      --- 1602-19-736-031

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. B. Sandeep**

Project Guide



**Dr. T. Rama Mohan Rao**

Professor & HOD  
Dept. of Mechanical Engg.

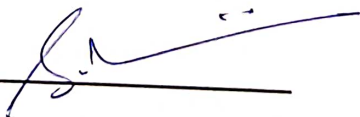
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**


This is to certify that the Theme based project report entitled "**Design and modelling of multi-function robotic gripper**" is a bonafide record of a Theme based project work carried out by

Ch. Sai Lalitha Srija - - - 1602-19-736-032  
B. Sankeerthana - - - 1602-19-736-038  
A. Sathwika - - - 1602-19-736-041

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr. P.V.S. Subhashini**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

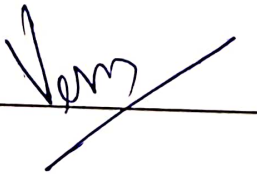
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**


This is to certify that the Theme based project report entitled "**DESIGN AND ANALYSIS OF STEERING SYSTEM IN 4-WHEELER**" is a Bonafede record of a Theme based project work carried out by

N.SAI PAVAN	--- 1602-19-736-033
A.SAITEJA	--- 1602-19-736-036
G. SATISH	--- 1602-19-736-042

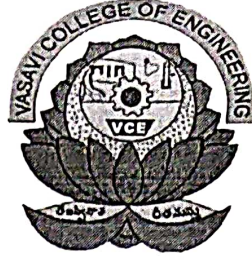
in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. M. VENUGOPAL REDDY**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Egg.



**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**Design And Analysis of Earthen Pot Air Cooler**" is a bonafide record of a Theme based project work carried out by

O. SAIRAM	1602-19-7369-035
V. SATHWIK KRISHNA	1602-19-7369-039

In the Department of Mechanical Engineering Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

**Mr. Mohammed Luqman**  
Project Guide

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled. "DESIGN OF SOLAR WATER HEATER FOR DOMESTIC PURPOSE" is a bonafide record of a Theme based project work carried out by

M. RAKESH --- 1602-19-736-028  
E. RAMDAS --- 1602-19-736-029  
K. ROHIT --- 1602-19-736-030

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr. P. Venkateswara Rao**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

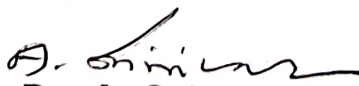
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIAUNIVERSITY  
IBRAHIMBAGH, HYDERABAD**


## **CERTIFICATE**

This is to certify that the Theme based project report entitled "Design and Analysis of a Turbocharger Impeller" is a bonafide record of a Theme based project work carried out by

K Shiva Subrahmanyam	--- 1602-19-736-046
B Vishnu	--- 1602-19-736-056
U Abhishek	--- 1602-19-736-302

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Dr. A. Srinivas**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HoD  
Dept. of Mechanical Engg.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

# CERTIFICATE

This is to certify that the Theme based project report entitled "**Solar Powered Electric Bike**" is a bonafide record of a Theme based project work carried out by

A.Shivank	---	1602-19-736-047
N.Sragwin	---	1602-19-736-048
D.Vamsi	---	1602-19-736-052

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

*Kishore*

Dr. K. Kishore  
Project Guide



Dr. T. Ramamohan Rao  
Professor & HOD  
Dept. of Mechanical Engg

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

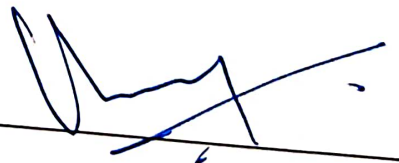
This is to certify that the Theme based project report entitled "FABRICATION AND ANALYSIS OF SEISMIC DAMPERS IN CIVIL STRUCTURES" is a bonafide record of a Theme based project work carried out by

S.Srujan            --- 1602-19-736-049  
G.Tejdeep        --- 1602-19-736-050  
D.Vikyath        --- 1602-19-736-055

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



Mr. VBS Rajendra  
prasad  
Project Guide



Dr. T. Ramamohan Rao  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY IBRAHIMBAGH,  
HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**DESIGN AND STRUCTURAL ANALYSIS OF HELICAL GEAR**" is a bonafide record of a Theme based project work carried out by

V THANMAYI --- 1602-19-736-051

CH ARUN KUMAR --- 1602-19-736-305

B AKHILA --- 1602-19-736-306

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
Dr.P.V. GOPAL KRSHNA

Associate Professor

  
Dr. T. Ramamohan Rao  
Professor & HOD

Dept. of Mechanical Engineering.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

**CERTIFICATE**

This is to certify that the Theme Based project report entitled "Design of modified tool head for shaper." is a bonafide record of a theme based project carried out by

B.GOUTHAM                      1602-19-736-303

R.MAHESH                      1602-19-736-304

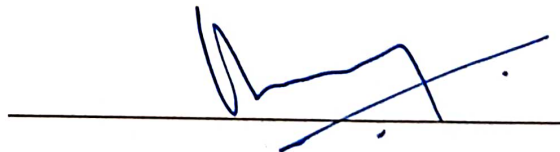
MOHAMMAD.AZAS   1602-19-736-314

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



***Dr.P.V.Gopal Krishna***

***Project Guide***



***Dr.T.Rammohan Rao***

***Professor & HOD***

***Dept. of Mechanical Engg.***

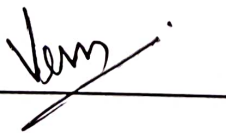
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIAUNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**DESIGN AND FABRICATION OF A DEVICE FOR POWER GENERATION USING SPEED BREAKER MECHANISM**" is a bonafide record of a Theme based project work carried out by

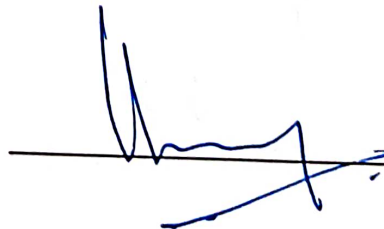
SK.SOHEL --- 1602-19-736-045  
L.VIDHYA SAGAR --- 1602-19-736-054  
A.NAVEEN KUMAR--- 1602-19-736-313

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2022-23.



**Mr.M.VENUGOPAL REDDY**

Project Guide



**Dr. T. Ramamohan Rao**

Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Mini project report entitled "Design & Analysis of Battery operated weeder." is a bonafide record of a mini project carried out by

S.Sai kumar      1602-18-736-301  
B.Tharun        1602-19-736-315

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Mr. M. Venugopal reddy**

**Project Guide**

  
**Dr. T. Rammohanrao**

**Professor & HOD**  
Dept. of Mechanical Engg.


**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "Solar Based Domestic Refrigeration Using Peltier Module" is a bonafide record of a Theme based project work carried out by

D. Suhas Reddy	- - - 1602-19-736-103
B. Sujay Rahul	- - - 1602-19-736-104
K. Uday Kiran	- - - 1602-19-736-108

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Dr./Mr. D. S. VENKATAIAH**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "*Arduino based obstacle Avoidance Robot using ultrasonic sensor*" is a bonafide record of a Theme based project work carried out by

TANMAYI INAPARTHY	1602-19-736-105
SHAIK AFRIDI	1602-19-736-309
A.CHAITHANYA CHAKRAVATH	1602-19-736-310

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

---

**Dr.PVS SUBHASHINI**  
Project Guide



---

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

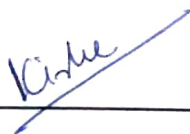
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**Design And Analysis of Roll Cage Using Composites**" is a bonafide record of a Theme based project work carried out by

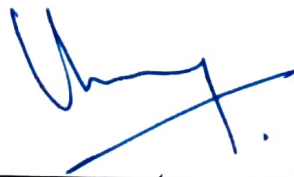
Tavishi Garg                      - - - 1602-19-736-106  
A Tharun Reddy                 - - - 1602-19-736-107

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



---

**Dr. K KISHORE**  
Project Guide



---

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled "DESIGN AND ANALYSIS OF A SOLAR POWERED LAWN Mower " is a bonafide record of a Theme based project work carried out by

CH VAISHNAVI --- 1602-19-736-109  
M VISHAL REDDY--- 1602-19-736-114

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. K.I SPURGEON**  
*Ramamohan Rao*  
Project Guide



**Dr. T. Lane M.**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the theme based project report entitled  
“Modelling and fabrication of regenerative braking system” is a  
bonafide record of a theme based project work carried out by

<b>D.Sreevarsha</b>	<b>--- 1602-19-736-101</b>
<b>P.Vamshi</b>	<b>--- 1602-19-736-110</b>
<b>K.Veerabhadhariah</b>	<b>--- 1602-19-736-112</b>

in the Department of Mechanical Engineering, Vasavi College of  
Engineering (Autonomous) (Affiliated to Osmania University),  
Hyderabad during the academic year 2021-22.

  
M.F.K.I. Spurgeon  
*Assistant Professor*  
**Project Guide**

  
Dr. T. Ramamohan Rao  
*Professor & HOD*  
**Dept. of Mechanical Engg.**

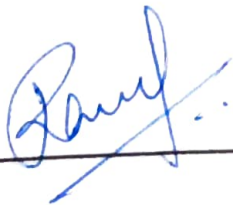
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**Wild boar threatening system**" is a bonafide record of a theme-based project work carried out by

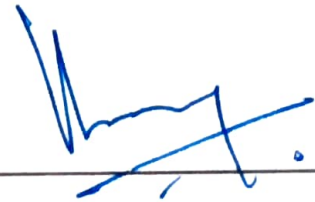
P. SRIKANTH        - - - -1602-19-736-102  
B. VARUN RAO     - - - -1602-19-736-111  
G.VAMSHI KRISHNA- - -1602-19-736-307

in the Department of Mechanical Engineering, Vasavi  
College of Engineering (Autonomous) (Affiliated to  
Osmania University), Hyderabad during the academic  
year 2021-22.



**Dr.P.Venkateswara Rao**

**Project Guide**



**Dr. T. Ramamohan Rao**

**Professor & HOD  
Dept. of Mechanical Engg.**

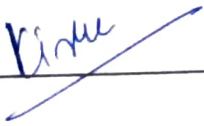
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

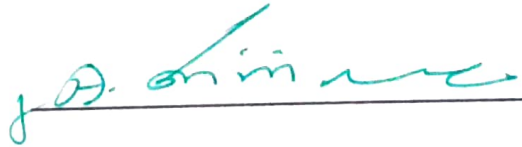
This is to certify that the Theme based project report entitled "Extraction of fuel wax from plastic waste" is a bonafide record of a Theme based project work carried out by

BANOTH.VINAY     --- 1602-19-736-113  
VEMAN KUMAR     --- 1602-19-736-307  
RAHUL YADAV       --- 1602-19-736-088

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr. Kishore sir**  
Project Guide



**Dr. T. Ramamohan Rao sir**  
Professor & HOD  
Dept. of Mechanical Engg.

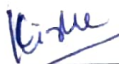
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIAUNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**WIND & SOLAR POWER LAPTOP MOBILE CHARGING STATION.**" is a bonafide record of a Theme based project work carried out by

G.VISHALI                      - - - 1602-19-736-311  
V.SWETHA                      - - - 1602-19-736-312

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



**Dr.K.KISHORE**  
Project Guide



**Dr.T.Ramamohan Rao**

Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the Theme based project report entitled "Design of Round Chain Link" is a bonafide record of a Theme based project work carried out by

Arun Kumar - - - 1602-19-736-059  
Ashwin Acharya - - - 1602-19-736-061  
Nithin Reddy - - - 1602-19-736-075

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr. Md. Luqman**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the Theme based project report entitled "**POWER GENERATION USING SPEED BREAKERS**" is a bonafide record of a Theme based project work carried out by

V.ASHRITHA	1602-19-736-060
E.CHETHANA	1602-19-736-064
A.PRANAY SAGAR	1602-19-736-077

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr.j.Anjaneyulu**  
Project Guide



**Dr. T. RamamohanRao**  
Professor & HOD  
Dept. of **Mechanical**

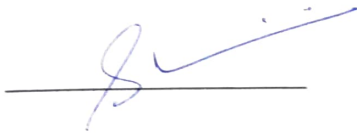
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

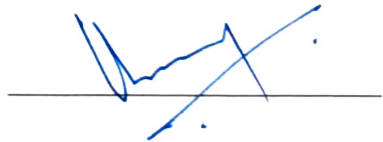
This is to certify that the Theme based project report entitled "**Arduino Based Industrial Conveyor Belt**" is a bonafide record of a Theme based project work carried out by

Aditya Yashaswi	--- 1602-19-736-057
Karthik Ashtekar	--- 1602-19-736-069
Nisarg Desai	--- 1602-19-736-074

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr. P.V.S. Subhashini**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**THERMAL AND VIBRATIONAL ANALYSIS OF TWO-WHEELER DISC BRAKE MOTOR**" is a bonafide record of a Theme based project work carried out by

KARTHIK REDDY	1602-19-736-070
S. NIHARIKA	1602-19-736-073
P. PRAMOD	1602-19-736-076

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

**Mr. Suda Venkateshwarulu**  
Project Guide

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY IBRAHIMBAGH,  
HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report  
entitled "**TO STUDY THE AFFECT OF PROCESS  
PARAMETERS ON TENSILE STRENGTH OF WELDED JOINT  
USING TIG WELDING ON MILD STEEL**" is a bonafide  
record of a Theme based project work carried out by

P. GANESH	1602-19-736-066
LOWKIK REDDY	1602-19-736-071
AFTAB HUSSAIN	1602-19-736-072

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.



**Mr. K. Veladri**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

**This is to certify that the Theme based project report entitled “Biomass using Banana Peel Waste for electricity generation” is a bonafide record of a Theme based project work carried out by**

Amulya Addanki 1602-19-736-058

Grishma Jonnada 1602-19-736-067

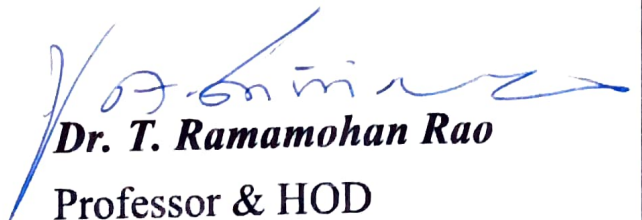
Radhika Ayyagari 1602-19-736-078

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr. P. Venkateswara Rao**

Project Guide



**Dr. T. Ramamohan Rao**

Professor & HOD

Dept. of Mechanical Engg.

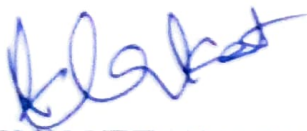
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report  
entitled  
“ Footstep Power Generation  
Using Rack and Pinion Mechanism”  
is a bonafide record of a Theme based project work  
carried out by

G. Rahul Chandra	1602-19-736-079
B. Rakesh	1602-19-736-081
C. Samyuktha	1602-19-736-092

in the Department of Mechanical Engineering, Vasavi College of Engineering  
(Autonomous) (Affiliated to Osmania University), Hyderabad during the  
academic year 2021-22.



**MR.S.VENKATESWARULU**  
Assistant Professor  
Department of mechanical engg.



**DR.RAMAMOHAN RAO**  
Professor & HOD  
Department of Mechanical Engg.

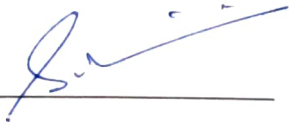
VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD

## CERTIFICATE

This is to certify that the Theme based project report entitled "**IOT BASED WEATHER MONITORING SYSTEM**" is a bonafide record of a Theme based project work carried out by

**K. RAJ KIRAN**      1602-19-736-080  
**K.RUPESH VARMA**      1602-19-736-086  
**SHOIEB HUSSAIN**      1602-19-736-094

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Dr.P.V.S.Subashini**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**FABRICATION OF SWING ELECTRICTY GENERATION**" is a bonafide record of a Theme based project work carried out by

<b>G.RAKESH</b>	<b>1602-18-736-082</b>
<b>K.RAMYASRI</b>	<b>1602-18-736-083</b>
<b>SAI TEJA NETA</b>	<b>1602-18-736-091</b>

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mr.T.KRISHNA CHAITANYA**  
Project Guide



**Dr. T. RAMAMOCHAN RAO**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "Drip Irrigation System Using a Solar Panel" is a bonafide record of a Theme based project work carried out by

K.Rohil	1602-19-736-084
Siddarth Nahata	1602-19-736-099
G.Kishore Sooraj Reddy	1602-19-736-100

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.



**Mrs.S.Kirthana**  
Project Guide



**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "CONSTRUCTION OF WHIRLPOOL TURBINE." is a bonafide record of a Theme based project work carried out by

D.ROHITH - - - 1602-19-736-085

M.SAI CHALAMA REDDY - - - 1602-19-736-087

in the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

**Mr.S.Sree Krishna**  
Project Guide

**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)**

**AFFILIATED TO OSMANIA UNIVERSITY**

**IBRAHIMBAGH, HYDERABAD**

# **CERTIFICATE**

This is to certify that the Theme based project report entitled  
"The Gas Leak Detection  
Based on a Wireless Monitoring System  
using IOT." is a bonafide record of a Theme based project  
work carried out by

SAI TARUN GOUD 1602-19-736-09

SHIVA SAI PRANEETH 1602-19-736-096

in the Department of Mechanical Engineering, Vasavi College  
of Engineering (Autonomous) (Affiliated to Osmania University),  
Hyderabad during the academic year 2021-22.



**Dr.A.SRINIVAS**

**(i) Project Guide**



**Dr. T. RamamohanRao**

**Professor & HOD**  
**Dept. of Mechanical Engg.**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled "**Semi trailing suspension for an SAE BAJA vehicle**" is a bonafide record of a Theme based project work carried out by

SK.Munthasir - - - 1602-19-736-093

T. Shravya Reddy - - - 1602-19-736-097

Shubhang.B - - - 1602-19-736-098

in the Department of Mechanical Engineering,  
Vasavi College of Engineering (Autonomous)  
(Affiliated to Osmania University), Hyderabad during  
the academic year 2021-22.

**Dr.T.RamaMohan Rao**  
Project Guide

**Dr.T.Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.


VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD


## CERTIFICATE

This is to certify that the Theme based project report entitled **“Fabrication of Remote Controlled Window Blinds using IOT”** is a bonafide record of a Theme based project work carried out by

B. SAI GANESH	---	1602-19-736-088
N. SAI RAM SAGAR	---	1602-19-736-089
SHAIK ZOHRA JABEEN	---	1602-19-736-095

In the Department of Mechanical Engineering, Vasavi College of Engineering (Autonomous) (Affiliated to Osmania University), Hyderabad during the academic year 2021-22.

  
**Dr. P.V.S. Subhashini**  
Project Guide

  
**Dr. T. Ramamohan Rao**  
Professor & HOD  
Dept. of Mechanical Engg.

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
AFFILIATED TO OSMANIA UNIVERSITY  
IBRAHIMBAGH, HYDERABAD**

## **CERTIFICATE**

This is to certify that the Theme based project report entitled 'DEVELOPING A QUADCOPTER-X' is a bonafide record of a Theme based project work carried out by

<b>BHAVANI PRASAD DARAM</b>	<b>1602-19-736-062</b>
<b>CHARAN REDDY ARIGA</b>	<b>1602-19-736-063</b>
<b>DEEPKALYAN RAVIPATI</b>	<b>1602-19-736-065</b>
<b>HAMPI PADIGALA</b>	<b>1602-19-736-068</b>

in the  
Department of Mechanical Engineering, Vasavi  
College of Engineering (Autonomous) (Affiliated to  
Osmania University), Hyderabad during the  
academic year 2021-22.

  
**Dr. J. Anjaneyulu**  
**Associate Professor**  
**Project Guide**

  
**Dr. T. Ramamohan Rao**  
**Professor & HOD**  
**Dept. of Mechanical Engg.**