

**SAPTHAGIRI COLLEGE OF ENGINEERING**

**# 14/5, Chikkasandra, Hesaraghatta Main road, Bangalore-57**



**Department of Mechanical Engineering**

**CERTIFICATE**

Certified that the project work entitled "FABRICATION OF ECO FRIENDLY COOLING CABINET" carried out by **RAKSHITH R (1SG17ME068)**, **RAKESH D K (1SG16ME075)**, **NUTHAN N (1SG18ME427)**, **RENUKAPRASAD D U(1SG18ME431)** are bonafide students of Sapthagiri College of Engineering in partial fulfillment for the award of Bachelor of Engineering in 8<sup>th</sup> semester Mechanical Engineering of Visvesvaraya Technological University, Belagavi during the year 2020-21.

**MR. PADMANABHAG**

Signature of the Guide

**Dr. PMAHADEVSWAMY**

Signature of the HOD

**Dr. HRAMAKRISHNA**

Signature of the Principal

**Principal**

**Sapthagiri College of Engineering**  
14/5, Chikkasandra, Hesaraghatta Main Road,  
Bengaluru - 560 057

**Name of the Examiners:**

1 **Dr. BASAVARAJ RANIGER**

2 **padmanabhag-G**

**Signature with Date:**

11/8/21

# SAPTHAGIRI COLLEGE OF ENGINEERING


14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)


## DEPARTMENT OF MECHANICAL ENGINEERING





## CERTIFICATE

This Certified that the project Work entitled “**Design and Fabrication of Areca-Nut Tree Climbing Robot for Pesticide Spraying**” carried out by **Rudresh G (1SG17ME072)**, **Sanketh (1SG17ME076)**, **Santhosh Kumar S (1SG17ME077)**, **Vishal Venkatesh Bhandari (1SG17ME099)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at **Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

  
Signature of the Guide  
Mr. PADMANABHA G  
Assistant Professor

  
Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

  
Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

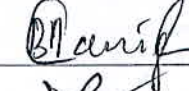

  
Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

  
Principal

Name of the Examiners

1. Dr. BACAVARAJ GANDEGER
2. Padmanabha G

Signature with Date

11/8/21

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “Fabrication of Exoskeleton Arm” carried out by Ankush UP (1SG17ME007), Bharath G (1SG17ME012), Bharath D M (1SG17ME013), Chethan M (1SG17ME018) Bonafide students of 8th semester, Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Mr. PRAMOD S V  
Associate Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057

Name of the Examiners

1. Dr. BASAVARAJ GANIGER
2. padmanabha G

Signature with Date

11/8/21

# SAPTHAGIRI COLLEGE OF ENGINEERING

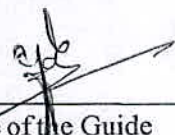
14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)


DEPARTMENT OF MECHANICAL ENGINEERING





## CERTIFICATE

This Certified that the project Work entitled “**DESIGN AND FABRICATION OF TWO WHEELED FORKLIFT**” (for industrial warehouse) carried out by **Gagana kusuma k (1SG18ME416), Harshith S(1SG18ME026), Nikith D (1SG17ME049), Pavithra N (1SG18ME428)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

  
Signature of the Guide  
Mr. SATISH KUMAR Y D  
Assistant Professor

  
Signature of Project Co-ordinator  
Mr. RAMESH N G  
Assistant Professor.

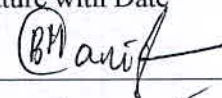
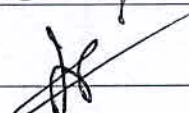
  
Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

  
Signature of Principal  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr-BAZAVARAS GANDLER
2. padmanabha-g

Signature with Date

  
 11/8/21



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “**FABRICATION OF RESCUE DEVICE FOR CHILD STRUCK IN PIT**” carried out by **MOHAMMED AZEEM (1SG17ME044)**, **CHARAN KUMAR .M(1SG18ME407)**, **CHETHAN .N(1SG18ME408)**, **VEERESH .B (1SG18ME438)** Bonafide students of 8th semester, **Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Dr. R.G DESHPANDE  
Associate Professor

Signature of Project Co-ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. BASAVARAJ GANDHER
2. Anilkumar . P.R

Signature with Date

10/8/21

# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled "Voice Activated X Y Plotter for Specially Abled" carried out by **Chandan P (1SG17ME020)**, **Mohan S (1SG17ME045)**, **Kiran S (1SG17ME035)**, **Jairaj B (1SG17ME031)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at **Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Dr. R G Deshpande)  
Associate Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. BAZAVARAJ GANDHER

2. Anil/Kumar. P.R

Signature with Date

Principal

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



**SAPTHAGIRI COLLEGE OF ENGINEERING**  
**DEPARTMENT OF MECHANICAL ENGINEERING**

14/5, Chikkasandra , Hesaraghatta Main Road, Benagloru-560057, Karnataka



**CERTIFICATE**

This is to certify that project entitled "SMART VEHICLE WITH ALCOHOL DETECTION & SMART BRAKING SYSTEM" has been satisfactorily completed by ARJUN G (1SG18ME403) ,DEVARAJ K N (1SG18ME411),DHANARAJ R (1SG18ME412), MANOHAR H S (1SG18ME422) students of 8<sup>th</sup> semester of Department of Mechanical Engineering in partial fulfillment of requirements for the award of Bachelor's degree in Mechanical Engineering presented by Visvesvaraya Technological University, Belagavi during academic year 2020-2021.

Mr. Hemanth Kumar H R  
Signature of the guide

Dr. P Mahadevaswamy  
Signature of the HOD

Dr. H Ramakrishna  
signature of the  
Principal

**Name of Examiners**

1. Dr. BASAVARAJ GANIGER
2. Anil Kumar P.R

**Signature with Date**

B. Ganiger 10/8/21  
Anil Kumar P.R

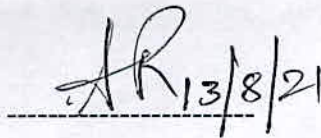
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057

## CERTIFICATE

This is to certify that the project work entitled **DESIGN AND DEVELOPMENT OF WATER PUMPING AND POWER GENERATION BY USING SWING ACTION** is a bona fide work carried out by

ANUP P	1SG17ME008
DHANUSH M	1SG18ME413
KUSHAL V	1SG17ME038
NITIN S RAM	1SG17ME051

in partial fulfillment for the award of degree of ***Bachelor of Engineering in Mechanical Engineering*** of Visvesvaraya Technological University, Belagavi during the year 2020-21. It is certified that all the suggestions indicated during internal assessment have been incorporated in the report and this report satisfies the academic requirement in respect of project work prescribed for the degree.



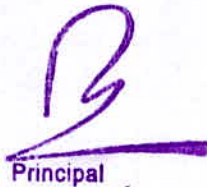
Mr. Arun kumar R  
Signature of Guide



Dr. P Mahadevaswamy  
Signature of HOD



Dr. H Ramakrishna  
Signature of  
Principal



Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



24

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**JNANA SANGAMA, BELAGAVI-590018**



**A Project report on**  
**“DESIGN AND DEVELOPMENT OF WATER PUMPING AND**  
**POWER GENERATION BY USING SWING ACTION”**

**UNDER THE GUIDANCE OF**

**Mr . ARUN KUMAR R**  
assistant professor  
mechanical department  
sapthagiri college of engineering

**SUBMITTED BY**

**ANUP P (1SG17ME008)**  
**DHANUSH M (1SG18ME413)**  
**KUSHAL V (1SG17ME038)**  
**NITIN S RAM (1SG17ME051)**



**DEPARTMENT OF MECHANICAL ENGINEERING**  
**SAPTHAGIRI COLLEGE OF ENGINEERING**

**(Accredited by NAAC with “A” grade)**

**( An ISO 9001:2015 & ISO 14001:2015 Certified Institution)**

**(Affiliated to VTU, Belagavi and approved by AICTE, New Delhi)**

**DEPARTMENT OF MECHANICAL ENGINEERING 14/5, Chikkasandra, Hesarghatta Main**  
**Road, Bengaluru-560057**

  
Principal  
**Sapthagiri College of Engineering**  
14/5, Chikkasandra, Hesarghatta Main Road  
Bengaluru - 560 057

# SAPTHAGIRI COLLEGE OF ENGINEERING

Accredited by NAAC with "A" grade

An ISO 9001:2015 & ISO 14001:2015 Certified Institution


Affiliated to VTU, Belagavi and approved by AICTE, New Delhi


## DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

Certified that the project work entitled "Fabrication of Solar Powered Load Carrying Vehicle" is a bonafide work carried out by Rakesh KV (1SG16ME076), Rohit M (1SG16ME081), Sathish Kumar N (1SG16ME089), Sudhakar M (1SG17ME429) in partial fulfillment for the award of Bachelor of Engineering in the Mechanical Engineering of Visvesvaraya Technological University, Belgaum, during the academic year 2020-2021. It is certified that corrections / suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree.

  
Mr. A M Mahesha  
Signature of Guide

  
Dr. P Mahadevaswamy  
Signature of HOD

  
Dr. H Ramakrishna  
Signature of Principal

### Reviewer


Name of the Reviewer

Signature with Date

1. Dr. BASAVARAJ GANDAR

 11/8/21

2. Dr. Padmanabha G

 11/8/21

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled **"PEDAL POWERED REVERSE OSMOSIS WATER PURIFICATION"** carried out by **Ananda (1SG18ME400), Anil Kumar R (1SG18ME401), Dhanush U (1SG18ME414), Divakar R (1SG18ME415)** Bonafide students of 8th semester, **Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Mr. Madhu Kumar Y C  
Assistant Professor

Signature of Project Co-ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. BASAVARAJ GANDAGER
2. Anilkumar. P.R

Signature with Date

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**SAPTHAGIRI COLLEGE OF ENGINEERING**  
 14/5, Hesaragatta, Main Road, Chikkasandara, Bengaluru-560057



## CERTIFICATE

Certified that the project work entitled “**MANLESS REMOTE CONTROLLED WEAPON SYSTEM**” carried out by **Prashanth (1SG17ME061), Punith E (1SG17ME064), S M Jagannath (1SG17ME073), Sanjeev S (1SG17ME075)** bonafide students of 8<sup>th</sup> semester, Department of **Mechanical Engineering** at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year 2020-21. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Mr. Pramod S V

Dr. P Mahadevaswamy

Dr. H Ramakrishna

Signature of the Guide  
Reviewer

Signature of the HOD

Signature of the Principal

Name of the Reviewer

Signature with date

1. Dr. BASAVARAS GANDEGER

Prashanth 10/8/21

2. Anil Kumar P.R

Anil Kumar P.R

Principal

**Sapthagiri College of Engineering**  
 14/5, Chikkasandra, Hesaraghatta Main Road  
 Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated to Visvesvaraya Technological University, Belagavi, Karnataka)

## DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “**Arduino based Fire Fighting Robot**” carried out by **Dikshith K A (1SG17ME022), Dinesh kumar A (1SG17ME023), Maruthi A S (1SG17ME042), Nihal M I (1SG17ME048)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at **Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Mr. Mahesh S  
Assistant Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P. MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Principal

**Sapthagiri College of Engineering**  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057

Name of the Examiners

1. DY. BASAVARAJ GANDHER

2. Anil Kumar P.R

Signature with Date

Anil 10/8/21

Anil P.R 10/8/2021

# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “**Design & Fabrication of Automated wheel chair**” carried out by **Goutham S B(1SG17ME024), Pavan B M(1SG17ME052), Pavan Kumar C(1SG17ME053), Shreemai N S(1SG16ME098)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at **Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Mr. Chethan B P  
Assistant Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. TULSIDAS D
2. MAHADEVI - S

Signature with Date

Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

## DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “**Fabrication of Solar Power Multipurpose Agricultural Vehicle**” carried out by **Chethan Gowda N (1SG17ME016)**, **Dhanush S (1SG17ME021)**, **Hema M (1SG17ME027)**, **Karthik Kumar A (1SG17ME034)** Bonafide students of 8th semester, **Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Dr. Basavaraj Ganiger  
Associate Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. TULSIOAS D

2. Ramesh. N-g

Signature with Date

7/8/21


7/8/21


**DEPARTMENT OF MECHANICAL ENGINEERING**  
**SAPATHAGIRI COLLEGE OF ENGINEERING**  
14/5, Hesaraghatta Main Road, Chikkasandra, Bengaluru-560057  
[AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM]  
(ISO: 9001-2015 and ISO: 14001-2015 certified Instituted)

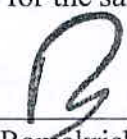


## CERTIFICATE

Certificate that the project work entitled **“Design and Fabrication of Tilting Mechanism for Tricycle with Brushless motor.”** Carried out by **Prajwal S (1SG17ME059), Rakesh D M (1SG17ME066), Roshan A P (1SG17ME071), Raghunatha K R (1SG18ME430)** bonafide students of 8<sup>th</sup> semester, Department of Mechanical Engineering of Sapthagiri college of Engineering, Bengaluru in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the **Visvesvaraya Technological University, Belgaum** during the year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respects of project work prescribe for the said degree.

  
Mr. Ramesh N G  
Signature of the guide

  
Dr. P Mahadevaswamy  
Signature of the HOD


  
Dr. H Ramakrishna  
Signature of the Principal


### Reviewer

Name of the Reviewer

1. Dr. Tulsidas D
2. Ramesh. N. G

Signature with Date

 7/8/21

 7/8/21

  
Principal  
**Sapthagiri College of Engineering**  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “**Design and Fabrication of Automated sanitization machine**” carried out by **Pradeep S Sureban (1SG17ME055)**, **Prajwal Bhardwaj A (1SG17ME056)**, **Pranav S Vishwamitra (1SG17ME060)**, **Shrivatsa S Rao (1SG17ME082)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Dr. Tulsidas D  
Associate Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

**Sapthagiri College of Engineering**  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057

Name of the Examiners


1. Dr. Tulsidas D
2. Ramesh. N. G


Signature with Date

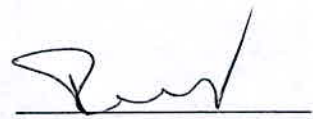


## CERTIFICATE

Certified that the project entitled "DESIGN AND FABRICATION OF PNEUMATIC EXO SKELETON" carried out by Shetty Varun Chandrashekar (1SG17ME080), Tejas MN (1SG17ME091), Tejas V (1SG17ME092), Vijay HP (1SG17ME096) bonafide students of 8th semester, Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-21. It is certified that all corrections/suggestions indicated for the Internal Assessment have been incorporated in the Report deposited in the Departmental library. Project report has been approved as it satisfies the academic requirements in respect of Internship Work prescribed for the said Degree.

  
DR. P MAHADEVASWAMY  
SIGNATURE OF THE GUIDE

  
DR. H RAMAKRISHNA  
SIGNATURE OF THE PRINCIPAL

  
DR. P MAHADEVASWAMY  
SIGNATURE OF THE HOD

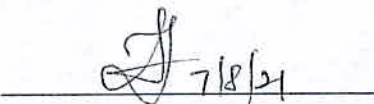
### Reviewer

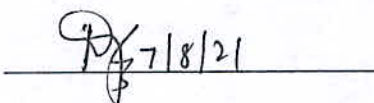
#### Name of the Reviewer

1. DR. TULADAS D

2. Ramch. N G

#### Signature with Date

 7/8/21

 7/8/21

  
Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hosaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

## DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project Work entitled “Design & Fabrication of Self Operated Water Purifier( Using Fruit Peels)” carried out by Abhilesh D (1SG17ME001), Chirag P Hegde (1SG17ME019), Anil P Gouda (1SG17ME005), Ashrith R (1SG17ME010) Bonafide students of 8th semester, Department of Mechanical Engineering at Sapthagiri College of Engineering, Bengaluru in partial fulfillment of the award of Bachelor of Engineering in Mechanical Engineering of the Visvesvaraya Technological University, Belagavi during the year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Dr. R G Deshpande  
Associate Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057

Name of the Examiners

1. Dr. T. V. J. DAS D

2. Mahesh

Signature with Date

9/8/21

# SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057 (Affiliated  
to Visvesvaraya Technological University, Belagavi, Karnataka)

DEPARTMENT OF MECHANICAL ENGINEERING



## CERTIFICATE

This Certified that the project work entitled **“Development of Collaborative Robot for Quality Inspection”** carried out by **Hemanth U (1SG17ME029)**, **Manoj M (1SG17ME041)**, **Nandan B N (1SG17ME046)**, **Anila Kumara (1SG18ME402)** Bonafide students of 8th semester, **Department of Mechanical Engineering** at **Sapthagiri College of Engineering, Bengaluru** in partial fulfillment of the award of **Bachelor of Engineering in Mechanical Engineering** of the **Visvesvaraya Technological University, Belagavi** during the year **2020-21**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

Signature of the Guide  
Mr. MAHESH S  
Assistant Professor

Signature of Project Co-Ordinator  
Mr. RAMESH N G  
Assistant Professor.

Signature of the HOD  
Dr. P. MAHADEVASWAMY  
Department of Mechanical Engineering

Signature of Principal.  
Dr. H. RAMAKRISHNA  
Principal, SCE

Name of the Examiners

1. Dr. Tulsi Das D

2. Ramesh. N. G

Signature with Date

7/8/21

7/8/21

Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bengaluru - 560 057



# SAPTHAGIRI COLLEGE OF ENGINEERING

(Affiliated to VTU, Belagavi, Approved by AICTE, New Delhi)  
ISO 9001:2015 & ISO 14001:2015 Certified Institute  
Accredited By NAAC with "A" Grade  
#14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore – 560057  
**2020-2021**

## Department of Mechanical Engineering



### Certificate

Certified that the Project Work entitled "Design and Fabrication of foldable E-Bike" carried out by Rakesh G K (ISG17ME067), Rohith K C (ISG17ME070), Sumanth S (ISG17ME090) and Vinoop A (ISG17ME098), bonafide students of Sapthagiri College of Engineering, in partial fulfillment for the award of Bachelor of Engineering in Mechanical Engineering of Visvesvaraya Technological University, Belagavi during the academic year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the Department Library. The project report has been approved as it satisfies the academic requirements in respect of Project Work Phase II (17MEP85) prescribed for the said degree.

Signature of the Guide  
Dr. Tulsidas D  
Assistant Professor

Signature of the HOD  
Dr. P Mahadevaswamy  
Professor & Head

Signature of the Principal  
Dr. H Ramakrishna  
Principal

#### EXTERNAL EXAMINATION:

Name of the Examiners

Principal  
Sapthagiri College of Engineering  
14/5, Chikkasandra, Hesaraghatta Main Road  
Bangalore - 560 057

Signature with Date

1. Dr. Tulsidas D

[Signature] 7/8/21

2. Ramesh. N. G.

[Signature] 7/8/21