

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 –2020



A Project Report

on

**“DESIGN OF SEWAGE TREATMENT PLANT FOR Dr. TTIT
CAMPUS”**

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work -15CVP78 for the award of degree of
Bachelor of Engineering**

in

. Civil Engineering

Submitted by

AAMINA RIZWAN

- 1GV15CV033

AKSHAYA K

- 1GV15CV032

MANIKANTA T D

- 1GV16CV010

SUDHARSHANA B

- 1GV17CV400

Carried out at

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY

Under the Guidance of
Dr. Syed Ariff, Principal,
Dept. of Civil, Dr.TTIT



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Department of Civil Engineering

Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120


2019-2020

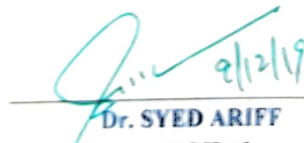
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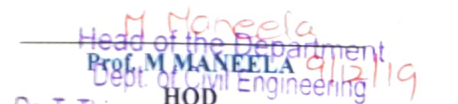


CERTIFICATE

This is to certify that the Project entitled "DESIGN OF SEWAGE TREATMENT PLANT FOR Dr.TTIT CAMPUS" is a bonafide work carried out by **AAMINA RIZWAN -1GV15CV033, AKSHAYA K-1GV15CV032, MANIKANTA T D- 1GV16CV010, SUDHARSHANA B-1GV17CV400** in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.


Guide
Dr. SYED ARIFF
PRINCIPAL

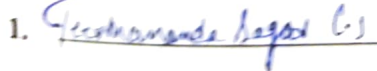


Dr. SYED ARIFF
PRINCIPAL

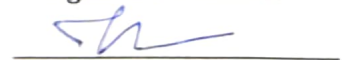

Head of the Department
Prof. M. MANEELA
Dept. of Civil Engineering
HOD
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563 120

Name of the Examiners

External Viva

Signature with date

1. 
2. 


M. Maneela

ABSTRACT

Now days, water scarcity is the most hazardous threaten to our world and it will be a major problem factor in future. Water sources both in surface and ground level are leads to decrease day by day due to human and natural activities. So, there is a necessity to recycle waste water for the future generation of the world to avoid such conflicts related to water.

All educational institutions do not have proper treatment unit for treating the sewage created by it. So it is required to construct a sewage treatment plant with

This project deals with the planning and designing of sewage treatment plant for Dr. T. Thimmaih Institute of Technology (Dr.TTIT) college campus. Sewage treatment is the process of removing contaminants from waste water and household sewage, both runoff effluents and domestic waste. It includes physical, chemical and biological processes to remove contaminants and produce treated waste water. Modern tool usage such as Auto cad and MS excel will be used in the designing process.

The recycled water can be used for various purposes like water to gardening, toilet flushing, farming and other requirements.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 –2020



A Project Report

on

**“PREVENTION OF ROAD ACCIDENTS BY INTELLIGENT
TRANSPORTATION SYSTEM”**

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work - 15CVP78 for the award of degree of
Bachelor of Engineering**

in

Civil Engineering

Submitted by

ARCHANA R	- 1GV16CV002
ASHWINI B S	- 1GV16CV004
MASTHANVALI M R	- 1GV16CV012
SHARON RAPHELLA W	- 1GV16CV027

Carried out at

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY

Under the Guidance of

**Mr. Teerthananda Sagar C S, Assistant Prof,
Dept. of Civil, Dr.TTIT**



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Department of Civil Engineering

Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

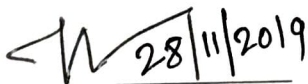
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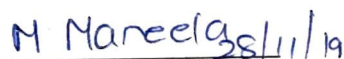
CERTIFICATE

This is to certify that the Project entitled “**PREVENTION OF ROAD ACCIDENTS BY INTELLIGENT TRANSPORTATION SYSTEM**” is a bonafide work carried out by **ARCHANA R-1GV16CV002, ASHWINI B.S- 1GV16CV004, MASTHANVALI M R - 1GV16CV012, SHARON RAPHELLA W-1GV16CV027** in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.

 28/11/2019

Guide

Mr. TEERTHANANDA SAGAR C.S
Assistant professor

 28/11/19

Prof. M. MANEELA

Head of the Department
HOD
Dept. of Civil Engineering

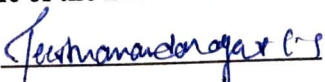
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563 120


DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY
OORGAUM, K.G.F. - 563 120
PRINCIPAL


Name of the Examiners

External Viva

Signature with date

1. 

2. 


M. Maneela

ABSTRACT

Every year death toll and severe injuries are caused by road accidents, and each year this number is growing swiftly. The road accident report for 2017-2018 reveals that there were 4.6 lakhs unfortunate incidences of road accidents [MORTH]. The major cause of road accidents in India are drunk and drive, weather conditions, rash driving, overtaking, hairpin bend, road humps etc. This complication can be solved up to some extent by diminishing strategies based on Intelligent Transport System (ITS). ITS is an advanced technologies of telecommunication, information, sensing and detecting, in all kinds of transportation system. The aim of our project is to prevent road accidents, especially we are concentrating on *Decision making by driver to overtake, Decision making by driver of Heavy Vehicle during change of lanes, Curves or Hairpin bend, Road humps*. To overcome this scenario's we propose a system which uses Sensors, LED lights, buzzers and warning light etc. This Technology helps in ensuring safe mobility & conveyance for providing smart traffic & transportation management.

Key Words: Road accidents, ITS, Sensors, Decision making, Accident prevention

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 -2020



A Project Report

on

“CONSTRUCTION AND COST ESTIMATION OF GREEN BUILDING”

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work -15CVP78 for the award of degree of
Bachelor of Engineering**

in

Civil Engineering

Submitted by

ADARSH S V	- 1GV16CV001
CHAITANYA H N	- 1GV16CV006
MANTHESH E S	- 1GV16CV011
RAMAPPA M SOOLI	- 1GV16CV018

Carried out at

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY

**Under the Guidance of
Mr. Praveen K, Assistant Prof,
Dept. of Civil, Dr.TTIT**



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Department of Civil Engineering

Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

2019-2020

(Affiliated to Visvesvaraya Technological University, Belagavi)



CERTIFICATE

This is to certify that the Project entitled “CONSTRUCTION AND COST ESTIMATION OF GREEN BUILDING” is a bonafide work carried out by ADARSH S V-1GV16CV001, CHAITANYA H N - 1GV16CV006, MANTHESH E S-1GV16CV011, RAMAPPA M SOOLI-1GV16CV018 in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-20. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.


02/12/19

Guide
Mr. PRAVEEN K
Assistant professor

M. Maneela

Prof. M MANEELA 02/12/2019

Head of the Department
Dept. of Civil Engineering

Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563 120


27/12/19
DR. SYED ARIFF
PRINCIPAL
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K. G. F- 563120


Name of the Examiners

External Viva

Signature with date

1. Jeevananda Bagawats

2. M. MANEELA


M. Maneela

ABSTRACT

Green building concept is very popular in worldwide. The adverse impact of construction on the environment significantly promotes the development of green building concept worldwide. Green building are generally termed as environmentally friendly buildings. "A green building is one which Use less water, optimized energy efficiency, conserves natural resources, generates less waste and provides healthier space for occupants as compared to conventional buildings".....Integration of renewable energy source to generate energy onsite. Any construction Projects begins with layout of the building or structures followed by plan, estimation and execution of the construction of Project. And this project involves planning, analysis, Design, implementing green house concept and preparing a model of green building.

Keywords: Green building materials, GRIHA, LEED, Energy resources.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 - 2020



A Project Report

on

**“CHARACTERISTICS BEHAVIOR OF TERNARY BLENDED
STEEL FIBER REINFORCED CONCRETE”**

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work - 15CVP78 for the award of degree of
Bachelor of Engineering**

in

Civil Engineering

Submitted by

NAVEEN KUMARA R	- 1GV16CV014
PAVAN K M	- 1GV16CV015
RAMESH C	- 1GV14CV015
VENKATESHA K	- 1GV14CV020

**Under the Guidance of
Mr. Pavan Ekbote, Assistant Prof,
Dept. of Civil, Dr.TTIT**



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY
(Formerly Golden Valley Institute of Technology)
Department of Civil Engineering
Kolar Gold Field – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

2019-2020

(Affiliated to Visvesvaraya Technological University, Belagavi)



CERTIFICATE

This is to certify that the Project entitled “**CHARACTERISTIC BEHAVIOUR OF TERNARY BLENDED STEEL FIBER REINFORCED CONCRETE**” is a bonafide work carried out by **NAVEENA KUMAR R (1GV16CV014)**, **PAVAN K M (1GV16CV015)**, **RAMESH C (1GV14CV015)** and **VENKATESHA K (1GV14CV020)** in partial fulfillment of the requirements for the award of **BACHELOR OF ENGINEERING IN CIVIL ENGINEERING** of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.

Guide

Mr. PAVAN EKBOTE

Assistant professor

Dr. SYED ARIFF
PRINCIPAL

Prof. M MANEELA 02.12.2019

HOD

Head of the Department

Dept. of Civil Engineering

Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563120

Name of the Examiners

External Viva

Signature with date

1. Tejashwanda Sagat

2. M MANEELA

M. Maneela

ABSTRACT

This project represents the results of an experimental investigation of the characteristics behavior of Ternary Blended Concrete, it containing Fly ash (FA), Ground Granulated Blast Furnace Slag (GGBFS) as partial replacement for ordinary Portland cement (OPC). The test results of the study shows that the characteristics behavior of Ternary Blended Concrete such as Compressive strength, Tensile strength and Flexural strengths are increased. If there is a need of optimize usage of admixtures to archive more strength it can be done by taking into consideration at how much replacement, maximum strength is achieved and the preceding result whichever is maximum.

Key words: cement, sand, coarse aggregate, fly ash, GGBFS, water, super plasticizers

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 -2020



A Project Report

on

**“EXPERIMENTAL STUDY ON STRENGTH
CHARACTERISTICS OF SELF COMPACTING CONCRETE
BY PARTIAL REPLACEMENT OF CEMENTITIOUS
MATERIALS”**

**Submitted in the partial fulfillment of the requirement for the
VIII Semester Project Work -15CVP85 for the award of degree of
Bachelor of Engineering**

in

Civil Engineering

Submitted by

CHANDRAKALA R

- 1GV15CV006

PRASHANTH P

- 1GV16CV016

SALMA BEGUM K

- 1GV16CV019

SAURAV CHETTRI

- 1GV16CV021

Under the Guidance of

Mr.Manjunatha Singh

Assistant Professor

Department of Civil Engineering



Department of Civil Engineering

Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Oorgaum , Kolar Gold Fields, Karnataka – 563122

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

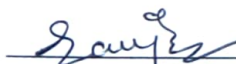
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CERTIFICATE

This is to certify that the Project entitled “**EXPERIMENTAL STUDY ON STRENGTH CHARACTERISTICS OF SELF COMPACTING CONCRETE BY PARTIAL REPLACEMENT OF CEMENTITIOUS MATERIALS**” is a bonafide work carried out by **CHANDRAKALA R - 1GV15CV006, PRASHANTH P - 1GV16CV016, SALMA BEGUM K - 1GV16CV019, SAURAV CHETTRI - 1GV16CV021** in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.


Guide
Mr. MANJUNATHA SINGH.
Assistant professor


Prof. M MANEELA 17/08/2020
HOD


Dr. SYED ARIFF
PRINCIPAL



Head of the Department
Dept. of Civil Engineering
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563120

Name of the Examiners

External Viva

Signature with date

1. Teerthamanda Sagari C.S
2. M. MANEELA


19/8/2020

19/8/2020

ABSTRACT

Innovation in the construction industry is increasing rapidly in current scenario. In the recent times there are research work going on to increase the strength and durability characteristics of construction materials. Once concrete was meant to be only a mixture of cement, coarse aggregates, fine aggregates and water but now to meet the various requirements extra materials are added to satisfy the needs.

A self-compacting concrete (SCC) is the one that is able to flow under its self-weight and completely fill the formwork, even in the presence of dense reinforcement, without the need of vibration. Since its first development in Japan in 1988, SCC has gained wider acceptance in Japan, Europe and USA due to its inherent distinct advantages. The major advantage of SCC is that it helps in increased construction speed and reduction in site man power.

This project aims at highlighting the improvement in the quality of self-compacting concrete while using various combination with different cementitious materials like ALCCOFINE.

Alccofine is a new generation, micro fine material of particle size much finer than materials like cement, fly ash, silica, etc. It is obtained from the slag of high glass content and has unique characteristics to enhance the performance of concrete in fresh and hardened stages due to its optimized particle size distribution.

The concrete specimens like cubes, cylinders and prisms are tested for the strength properties like compressive strength, split tensile strength and flexural strength which is cured for 3 ,7 and 28 days with different mix proportions.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 -2020



**A Project Report
on**

**“STORM WATER HARVERSTING IN URBAN PAVEMENTS
BY USING PERVIOUS CONCRETE”**

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work -15CVP78 for the award of degree of
Bachelor of Engineering**

**in
Civil Engineering**

Submitted by

AJITTH KUMAR B	- 1GV15CV030
JOHN SIMSON J	- 1GV16CV008
SAMPRAS STANLEY R	- 1GV16CV020
THILAK BALA KUMAR M	- 1GV16CV024

Carried out at

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY

**Under the Guidance of
Prof. M Maneela, HOD,
Dept. of Civil, Dr.TTIT**



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Department of Civil Engineering

Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

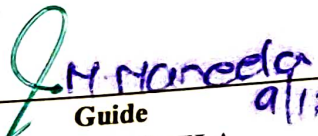
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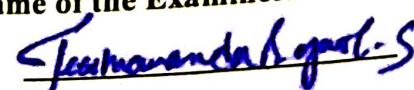
CERTIFICATE

This is to certify that the Project entitled "STORM WATER HARVESTING IN URBAN PAVEMENTS BY USING PERVIOUS CONCRETE" is a bonafide work carried out by AJITH KUAMR B-1GV15CV030, JOHN SIMSON J- 1GV16CV008, SAMPRAS STANLEY R - 1GV16CV020, THILAK BALA KUMAR M-1GV16CV024 in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.


Guide
Prof. M MANEELA
HOD
9/12/19

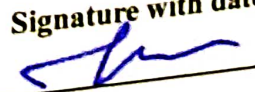

Dr. SYED ARIFF
PRINCIPAL
9/12/19
H. Maneela 9/12/19
Head of the Department
Prof. M. MANEELA
Dept. of Civil Engineering
HOD
Dr. T. Thimmaiah Institute of Technology
Oorgaum, K.G.F. - 563120

Name of the Examiners

1. 
2. M MANEELA

External Viva

Signature with date


H. Maneela

ABSTRACT

Due to modern urban development and improper drainage system, flooding has become common in India. Study suggests that use of pervious concrete is cost effective and eco-friendly. The use of pervious concrete consists of high permeability, low strength and high porosity when compared to the normal pavement or normal concrete. The aggregates are single size bonded with only cement paste which also omits the usage of fine aggregates thereby forming intercellular structures, which allows the storm water to seep into ground for recharge of ground water table by reducing the runoff of water on the surface. During the excess flow of storm water which cannot percolate the ground water surface enters the storage tank which is provided adjacent to the roads or beneath the surface of the footpath. The water which is stored in the storage tank can be used for external applications. However the concrete surface affects the tyres and creates noise, by using pervious concrete or exposed aggregate concrete it can be reduced.

Key words: Pervious concrete, storm water, ground water recharge, storage tank, external applications.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi - 590018

2019 -2020



**A Project Report
on**

“SAFETY ON ROADS UNDER LOW VISIBILITY”

**Submitted in the partial fulfillment of the requirement for the
VII Semester Project Work -15CVP78 for the award of degree of
Bachelor of Engineering**

**in
Civil Engineering**

Submitted by

KISHORE KUMAR R	- 1GV15CV009
SACHIN L	- 1GV15CV031
MITHUN	- 1GV15CV034
CHAKRAVARTHY	
VEENITH A	- 1GV16CV025

Carried out at

Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY

Under the Guidance of
Mrs. Pooja.M and Miss. Kavitha.V
Dept. of Civil, Dr.TTIT



Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

Department of Civil Engineering

Kolar Gold Fields – 563120

DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

OORGAUM, K.G.F. – 563120

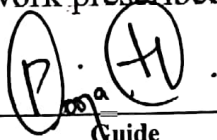
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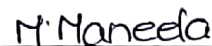


CERTIFICATE

This is to certify that the Project entitled “**SAFETY ON ROADS UNDER LOW VISIBILITY**” is a bonafide work carried out by **KISHORE KUMAR-1GV15CV009, SACHINL-1GV15CV031, MITHUN CHAKARAVARTHY J- 1GV15CV034, VEENITH A 1GV16CV025** in partial fulfillment of the requirements for the award of BACHELOR OF ENGINEERING IN CIVIL ENGINEERING of the Visvesvaraya Technological University, Belagavi during the year 2019-2020. The report has been approved as it satisfies the academic requirements with respect to Project work prescribed by the V.T.U of the above mentioned degree.


Guide

Mrs. POOJA.M and Miss. KAVITHA.V
Assistant professor


Prof. M MANEELA

6-12-19

HOD

Head of the Department
Dept. of Civil Engineering

Dr. T. Thimmaiah Inst.

Oorgaum, K.G.F.


Dr. SYED ARIFF

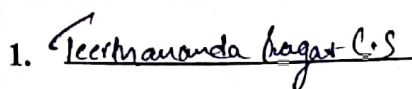
PRINCIPAL

Dr. T. Thimmaiah Institute of Technology

Oorgaum, K. G. F- 563120

External Viva

Name of the Examiners

1. 

2. M. MANEELA

Signature with date



M. Maneela

ABSTRACT

It is known that crashes tend to be severe in low visibility condition than under normal clear conditions. The effects of low visibility are one of the major concerns in the road safety. In this case the visibility tends to turn zero due to fog and heavy rainfall. In this study we bring in contrast the implementation and design of accident avoidance system using Arduino and ultrasonic sensors. The ultrasonic sensors can detect the static position of the vehicle and transmits information to the warning system and provides information to the driver behind. And we also use coding for this project in order to connect the ultrasonic sensors to Arduino. We use an Arduino software for connecting both the devices. After that we need to fetch the code and if it runs without any errors then the devices can be used.

Keywords:

Low visibility

Arduino UNO

Ultrasonic Sensor

Fog