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

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AKSHAYA K	- 1GV15CV032
MANIKANTA T D	- 1GV16CV010
SUDHARSHANA B	- 1GV17CV400

Carried out at

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9/12/19

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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

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ABSTRACT

Everyyeardeathtollandseverinjuriesarecausedbyroadaccidents,andeachyearthisnumber is growing swiftly. The road accident report for 2017-2018 reveals that there were 4.6 lakhs unfortunateincidencesofroadaccidents[MORTH].ThemajorcauseofroadaccidentsinIndia 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 transportationsystem. Theaimofourprojectistopreventroadaccidents,especiallyweare concentringon*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 lightsetc. 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

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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

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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

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2019 – 2020

A Project Report

on

"CHARECTERISTICS 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

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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

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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

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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

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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

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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

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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

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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