

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

JNANA SANGAMA CAMPUS, BELGAVI-590018



**A PROJECT REPORT**

On

**“AN EXPERIMENTAL STUDY ON THE  
STRENGTH PROPERTIES OF CONCRETE  
USING LOW COST NATURAL FIBER”**

Submitted by

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**In partial fulfillment of the requirements for the degree of  
BACHELOR OF ENGINEERING**

In

**CIVIL ENGINEERING**

**Under the Guidance of**

**Mrs. SWATHI**

**Assistant Professor**



**DEPARTMENT OF CIVIL ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**Moodbidri-574225, Karnataka**

**2019-2020**

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY  
MIJAR, MOODBIDRI D.K. -574225  
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DEPARTMENT OF CIVIL ENGINEERING  
**CERTIFICATE**

Certified that the project work entitled "AN EXPERIMENTAL STUDY ON THE STRENGTH PROPERTIES OF CONCRETE USING LOW COST NATURAL FIBER" has been successfully completed by

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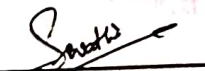
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The bonafide students of Department of Civil Engineering, Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in CIVIL ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI during the year 2020. 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 seminar work prescribed for the Bachelor of Engineering Degree.

  
Mrs. SWATHI

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# ABSTRACT

The following project report is a theoretical demonstration of the comprehensive use of bamboo as a reinforcing material in concrete construction and its extensive use in the substitution with steel as reinforcement in concrete load bearing members. The report has been derived with the help of conclusions and results of the previous reports of various conducted experiments for determining the mechanical properties of bamboo and its use as a material in construction. The construction principles involved in the designing of bamboo reinforced members and structures has been discussed in this document, the use of bamboo in the place of steel as a whole as well as with steel is shown to ensure the reduction in weight, economic advantages with its strength compromised to a slight and safe level. Various researches and study results will be used for the deduction of a method most suitable for the replacement of bamboo as reinforcing material in the right amount and the right proportion and the best possible placement in place of steel and or with steel.