VISVESVARAYA TECHNOGICAL UNIVERSITY

BELAGAVI- 590101

PROJECT REPORT

ON

"ANALYSIS AND DESIGN OF UNSYMMETRICAL COMPOSITE STRUCTURE"

Submitted in Partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING IN CIVIL ENGINEERING

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CERTIFICATE

Certified that the project work entitled "**ANALYSIS AND DESIGN OF UNSYMMETRICAL COMPOSITE STRUCTURE**"is a bonafide work carried out by**Sumukh R , Darshan M N , Prathapa M , Somashekara S D** bearing USNs respectively **4AL16CV111, 4AL17CV403, 4AL17CV417,4AL17CV422** in partial fulfillment for the award **of BACHELOR OF ENGINEERING in CIVIL ENGINEERING of VISVESVARAYATECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year **2019-2020**.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 project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

The use of Steel in construction industry is very low in India compared to many developing countries. Experiences of other countries indicate that this is not due to the lack of economy of Steel as a construction material. There is a great potential for increasing the volume of Steel in construction, Especially the current development needs in India. In the past, for the design of a building, the choice was normally between a concrete structure and a masonry structure. But the failure of many multi-storied and low-rise R.C.C. and masonry buildings the structural engineers to look for the alternative method of construction.

In this project we have taken the G+5 composite and RCC structure are analyzed using ETAB (Extended three-dimensional analysis in building system) software 16.2.1 and composite structure is compared to the RCC structure and also parameters such as shear force bending moment are studied. Loading is taken as per IS 875:1987 (PART-1,PART-2). And the composite section is been chosen an I-section. The bending moment of composite structure is 2.4 kN-m, and RCC structure is 20.50 kN-m. It is know that bending moment of composite structure is less than RCC structure. And also shear force of the composite structure is 1.2 kN, for concrete structure is 1.4 kN. Shear force is also low compared to RCC structure. Due to lesser bending moment in the composite structure the overall consumption of steel is less compare to RCC structure. So therefore the overall cost of the multi-storey building will be lesser than the RCC structure.