VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

"DESIGN OF HOSTEL BUILDING G+3 CONSIDERING SESMIC FORCES USING ETABS."

Submitted in partial fulfilment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

A PROJECT REPORT

Submitted By

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Certificate

Certified that the project work entitled "DESIGN OF HOSTEL BUILDING G+3 CONSIDERING SESMIC FOR USING ETABS" is a bonafide work carried out by

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Are bonafide students of Department of Civil Engineering of Alva's Institute of Engineering and Technology in partial fulfilment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020-2021. 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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Name of Examiners	Signature with date
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ABSTRACT

The project aims to analysis of hostel building (G+3) located at Kashmir under effect of Seismic forces. Shear forces and bending moments of beams and columns are evaluated that larger span have more shear forces and bending moment. This project present upper stories RCC framed building analyzed and designed under the lateral loading effect of earthquake using ETABS.

ETABS (Extended Three-Dimensional Analysis of Building system) is incorporated with all the major analysis that is static, dynamic, Linear and non-linear, Because of the facilities provided in this software at the modeling stage. Software considers the beams, columns slabs, Ramps and walls are as area members.

Analysis is carried out by static method and design is done as per IS 456:2000 guidelines. Also, an attempt has been made to analyse the structural elements. Drawing has been done using Auto CAD as per SP 34 and IS 1873.

Our building model has been analysed by ETABS software with a capacity of 100 students. It consists of around 50 rooms which has been allotted as per standards. The material properties of steel and concrete has assigned as per IS standards. Using this software, we have analysed and designed the beams, columns, slabs and staircase.

The displacement, base shear, storey shear, has been calculated which has been analysed in zone V under the seismic forces with the response reduction factor.