



Karnataka State Council for Science and Technology

(An autonomous organisation under the Dept. of Science & Technology, Govt. of Karnataka)

Indian Institute of Science Campus, Bengaluru – 560 012

Telephone: 080-23341652, 23348848, 23348849, 23348840

Email: office.kscst@iisc.ac.in, office@kscst.org.in Website: www.kscst.iisc.ernet.in, www.kscst.org.in

Dr. U T Vijay

Executive Secretary

Ref: 7.1.01/SPP/37

19th April, 2024

To,

The Principal

Alva's Institute of Engineering and Technology

Shobavana Campus Mijar

Moodbidri - 574 225

Dear Sir/Madam,

Sub : Sanction of Student Project - 47th Series: Year 2023-2024

Project Proposal Reference No. : 47S_BE_0923

Ref : Project Proposal entitled

**ANALYSIS OF DIFFERENT SLOPE FAILURE ALONG THE ROAD
SECTION OF SAKLESHPUR, KARNATAKA USING ROCK MASS
ANALYSIS AND KINEMATIC ANALYSIS APPROACH**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 47th Series". The project details are as below:

Student(s)	Mr. NONGMAITHEM BORISH SINGH	Department	CIVIL ENGINEERING
	Ms. SADVINI K. P.		
	Mr. RAHUL LEIMAPOKPAM		
	Ms. PRIYANKA MALAGITTI		
Guide(s)	Dr. H. G. UMESHCHANDRA	Sanctioned Amount (in Rs.)	5,000.00

Instructions:

- The project should be performed based on the objectives of the proposal submitted.
- Any changes in the project title, objectives or students team is liable for rejection of the project and your institution shall return the sanctioned funds to KSCST.
- Please quote your project reference number printed above in all your future correspondences.
- After completing the project, 2 to 3 page write-up (synopsis) needs to be uploaded on to the following Google Forms link <https://forms.gle/6s8hq5XbScsBMv3G9>. The synopsis should include following:
 - Project Reference Number
 - Title of the project
 - Name of the College & Department
 - Name of the students & Guide(s)
 - Keywords
 - Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
 - Objectives (about 10 lines)

PRINCIPAL

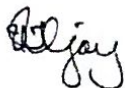
Alva's Institute of Engg. & Technology,
Mijar. MOODBIDRI - 574 225, D.K

- 8) Methodology (about 20 lines on materials, methods, details of work carried out, including drawings, diagrams etc)
 - 9) Results and Conclusions (about 20 lines with specific reference to work carried out)
 - 10) Scope for future work (about 20 lines).
- e) In case of incompeted projects, the sanctioned amount shall be returned to KSCST.
 - f) The sanctioned amount will be transferred by NEFT to the bank account provided by the College/Institute.
 - g) The sponsored projects evaluation will be held **third week of May 2024** onwards through Online Mode and the details of the same will be intimated shortly by email / Website
 - h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and student(s) shall be uploaded in the following Google Forms Link <https://forms.gle/Mi446v1U5fdFcMD99>. The report should be prepared in the format prescribed by the university.
 - i) The **Utilization Certificate and Statement of Expenditure duly signed by competent authority** of consolidated sanctioned projects from your institution need to be submitted **20 August 2024** without fail.

Please visit our website for further announcements / information and for any clarifications please email to spp@kscst.org.in

Thanking you and with best regards,

Yours sincerely,



(U T Vijay)

Copy to:

- 1) The HoD
CIVIL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI
- 2) Dr. H. G. UMESHCHANDRA
CIVIL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI
- 3) THE ACCOUNTS OFFICER
KSCST, BENGALURU

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI- 590 018, KARNATAKA, INDIA.



PROJECT REPORT ON

“ANALYSIS OF DIFFERENT SLOPE FAILURE ALONG THE ROAD SECTION OF SAKLESHPUR, KARNATAKA USING ROCK MASS CLASSIFICATION AND KINEMATIC ANALYSIS APPROACH”

Sponsored by Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560012

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

BACHELOR OF ENGINEERING IN CIVIL ENGINEERING

Submitted by

Nongmaithem Borish Singh - 4AL20CV013

Priyanka Malagitti - 4AL20CV016

Rahul Leimapokpam - 4AL20CV017

Sadvini K P - 4AL20CV019

**Under the Guidance of
Dr. H. G. UMESHCHANDRA
Associate Professor**



**ALVA'S
Education Foundation™**

**DEPARTMENT OF CIVIL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY MIJAR –
574 225
KARNATAKA, INDIA
AY 2023-24**



ALVA'S INSTITUTE OF ENGINEERING TECHNOLOGY

MOODBIDRI-574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE

Certified that the project work entitled "ANALYSIS OF DIFFERENT SLOPE FAILURE ALONG THE ROAD SECTION OF SAKLESHPUR, KARNATAKA USING ROCK MASS CLASSIFICATION AND KINEMATIC ANALYSIS APPROACH" is a bonafide work carried out by

Nongmaithem Borish Singh	4AL20CV013
Priyanka Malagitti	4AL20CV016
Rahul Leimapokpam	4AL20CV017
Sadvini K P	4AL20CV019

in partial fulfilment for the award of Bachelor of Engineering in civil engineering of **Visvesvaraya Technological University**, Belagavi during the academic year 2023-2024, it is certified that all corrections and 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 requirement in respect of the project work prescribed for the said degree.

Signature of the Guide

Dr. H G UMESHCHANDRA

Signature of HOD

**Prof. B DURGAPRASAD
BALIGA**

Signature of the Principal

**DR. PETER FERNANDES
PRINCIPAL**

**Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K**

EXTERNAL VIVA

Name of the Examiners

1. Ms. Anusha B Rao
2. Dr. Anusha Mogamul

Signature with Date

ABSTRACT

Slope failures along road sections pose significant risks to infrastructure and public safety. In the Sakleshpur region of Karnataka, India, such occurrences are frequent due to the complex geological and topographical features. This study presents an analysis of various slope failures along a specific road section in Sakleshpur, employing a combination of rock mass classification and kinematic analysis approaches. The study begins with a comprehensive survey of the geological and topographical characteristics of the area, including rock types, structural features, and slope angles. Rock mass classification systems such as the Rock Mass Rating (RMR) and Geological Strength Index (GSI) are utilized to assess the stability of the slopes and identify potential failure mechanisms. Furthermore, kinematic analysis techniques, are employed to evaluate the critical failure planes and their orientations. By integrating field observations with these analytical methods, the study aims to provide insights into the underlying causes of slope failures in the Sakleshpur region. The findings of this research will contribute to a better understanding of slope stability in similar geological settings and assist in the development of effective mitigation measures to minimize the risk of future slope failures along road sections in Sakleshpur and other regions facing similar challenges.