KSCST

# 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

24th April, 2023

Ref: 7.1.01/SPP/33

To,
The Principal,
Alva's Institute of Engineering and Technology,
Shobavana Campus, Mijar,
Moodbidri - 574 225.

Dear Sir/Madam,

Sub : Sanction of Student Project - 46th Series: Year 2022-2023

**Project Proposal Reference No. : 46S_BE_0917**
Ref : Project Proposal entitled **MORPHOMETRIC ANALYSIS OF VARAHI RIVER BASIN**

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 46th Series". The project details are as below:

| | | | |
|---|---|---|---|
| **Student(s)** | Mr. DHEERAJ S SINDHE | **Department** | CIVIL ENGINEERING |
| | Mr. ABDUL MUJEEB | | |
| | Mr. MANOHAR M | | |
| | Mr. KRUTHIK K | **Sanctioned Amount (in Rs.)** | 5,000.00 |
| **Guide(s)** | Dr. H G UMESHCHANDRA | | |
| | | | |

**Instructions:**

a) The project should be performed based on the objectives of the proposal submitted.
b) 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.
c) Please quote your project reference number printed above in all your future correspondences.
d) 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/nWTaJjvrwzp3Wmvt6. The synopsis should include following:
   1) Project Reference Number
   2) Title of the project
   3) Name of the College & Department
   4) Name of the students & Guide(s)
   5) Keywords
   6) Introduction / background (with specific reference to the project, work done earlier, etc) - about 20 lines
   7) 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 in the Nodal Centre/Online Mode and the details of the same will be intimated shortly by email / Website announcement.

h) After completion of the project, soft copy of the project report duly signed by the Principal, the HoD, Guide(s) and studetn(s) shall be uploaded in the following Google Forms Link https://forms.gle/YWz56TrGg7fnSQgc7. The report should be prepared in the format prescribed by the university.

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- 590018

## PROJECT REPORT ON

# "MORPHOMETRIC ANALYSIS OF VARAHI RIVER BASIN"

Sponsored by Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru- 560012

Submitted in partial fulfilment of requirements for the award of degree

**BACHELOR OF ENGINEERING**

**IN**

**CIVIL ENGINEERING**

Submitted by

| | |
|---|---|
| ABDUL MUJEEB | 4AL19CV001 |
| DHEERAJ S SINDHE | 4AL19CV007 |
| MANOHAR M | 4AL19CV017 |
| KRUTHIK K | 4AL20CV404 |

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, D.K- 574225

KARNATAKA

2022-23

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

**(A Unit of Alva's Education Foundation®, Moodbidri)**

**"Shobhavana", Mijar, Moodbidri – 574 225, D.K.**

**DEPARTMENT OF CIVIL ENGINEERING**

# Certificate

Certified that the project work entitled **"MORPHOMETRIC ANALYSIS OF VARAHI RIVER BASIN"** is the bona-field work carried out by

| | |
|---|---|
| **ABDUL MUJEEB** | **4AL19CV001** |
| **DHEERAJ S SINDHE** | **4AL19CV007** |
| **MANOHAR M** | **4AL19CV017** |
| **KRUTHIK K** | **4AL20CV404** |

in partial fulfilment forthe award of Bachelor of engineering in civil engineering of **Visvesvaraya Technological University, Belagavi** during the academic year 2022-2023, 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 project work prescribed for the said degree.

15/5/23

**Dr. H.G Umeshchandra**
Project guide & Co-ordinator

H.O.D.
Dept. of Civil Engineering
Alva's Institute of Engg. & Technology
Mijar, Moodbidri - 574 225

**Dr. H Ajith Hebbar**
Head of the Department

**Dr. Peter Fernandes**
Principal

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

**External Examiners**

1) Surendra. P

2) Swapna. S. A

**Signature with Date**

25/05/23

25/5/23.

# ABSTRACT

Drainage basin morphometry is a quantitative way of describing the characteristics of the surface form of drainage basin and provide important information about the region's topography and underlying geological structures. It plays an important role in selecting sites for construction of artificial recharge structures.

In present study has been made to discover the stream properties of Varahi River Basin, Dakshina Kannada district, Karnataka, using the various stream attributes such as the aerial, linear and relief parameters. The basin is having ten sub basins. The basin having elongated shape and coarse drainage texture indicates that the basin is in between the youth and the mature state.

In total 40 samples were collected from the various bore well. The samples were analyzed for various Physio-chemical parameters like pH, TDS, EC, Total hardness, Calcium, Magnesium, Sodium, Potassium, Chloride and Nitrates. Later test results are analyzed and compared with drinking water standards. concentration and quality of the potable water has deteriorated to a large extent at some sampling locations. Key words: Morphometry, Drainage basin, Topography, Geological structure.