



# Karnataka State Council for Science and Technology

## Indian Institute of Science Campus, Bengaluru - 560 012

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**Dr. S. G. Sreekanteswara Swamy**  
**Executive Secretary**

28th March 2018

Ref: 7.1.01/SPP/08

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

Dear Sir,

Sub : Sanction of Student Project - 41st Series: Year 2017-2018

**Your Project Proposal Reference No. : 41S\_BE\_1415**

Ref : Your Project Proposal entitled " CONTAMINATION OF SOIL AND GROUND WATER THROUGH  
LEACHING OF SEWAGE AND INDUSTRIAL WASTE WATER FROM  
UNLINED DRAINS IN MANGALORE

I am happy to inform that your project proposal referred above, has been approved by the Secretary, KSCST for "Student Project Programme - 41st Series" and has been sanctioned with a budgetary break-up as detailed below:

Student / s	Ms. NAYANA K & others	Budget	Amount (Rs)
		Materials/Consumables	4500.00
Guide/s	Dr. UMESHCHANDRA H G	Labor	
		Travel	
Department	CIVIL ENGINEERING	Miscellaneous	500.00
		Report	500.00
		TOTAL	5500.00
	RUPEES RUPEES SIX THOUSAND		

The following are the guidelines to carryout the project work :

- The project should be performed based on the objectives of the proposal sent by you.
- The project should be completed in all respects and one copy of the hardbound report along with softcopy of the full report in a CD (.pdf format) should be submitted to KSCST.
- Any change in the project title and objectives, etc., or students is liable to rejection of the project and the amount sanctioned needs to be returned to KSCST.
- Please quote your **project sanction reference number printed above** in all your future correspondences.
- Important:** After completing the project, 2 to 3 page write-up (synopsis) needs to be sent by e-mail [spp@kscst.iisc.ernet.in] and should include following :

- Title of the project
- Name of the College & Department
- Name of the students & Guide(s)
- Keywords

*Project file*

## 6) Introduction / background

(with specific reference to the project, work done earlier, etc) - about 20 lines

## 6) Objectives (about 10 lines)

## 7) Methodology (about 20 lines)

(materials, methods, details of work carried out, including drawings, diagrams etc)

## 8) Results and Conclusions

(about 20 lines with specific reference to work carried out)

## 9) Scope for future work (about 20 lines).

**(Note: The write-up (Synopsis) should be sent with the approval of project guide. The softcopy of the write-up, in MS Word format, should be sent by e-mail (spp@kscst.iisc.ernet.in). In your e-mail, please also include project proposal reference number and title of the project.)**

e) Projects selected for Seminar / Exhibition will be awarded.

The sanctioned amount will be sent separately by our Accounts Department.

**The sponsored projects evaluation will be held in the Nodal Centre and the details of the nodal centre will be intimated shortly by e-mail / Website announcement.**

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

Thanking you and with best regards,

Yours sincerely,

(S.G.S. Swamy)

Copy to:

- 1) The Head of the Department of  
CIVIL ENGINEERING  
Alva'S Institute Of Engineering And Technology,  
Shobavana Campus,  
Mijar,  
Moodbidri - 574 225.
- 2) Dr. H G UMESHCHANDRA  
**CIVIL ENGINEERING**  
Alva'S Institute Of Engineering And Technology,  
Shobavana Campus,  
Mijar,  
Moodbidri - 574 225.
- 3) The Finance Officer, KSCST, Bangalore



# **VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**“Jnana Sangama” Belagavi – 590018**



## **PROJECT REPORT ON “CONTAMINATION OF SOIL AND GROUND WATER THROUGH LEACHING OF SEWAGE AND INDUSTRIAL WASTE WATER FROM UNLINED DRAINS IN MANGALORE”**

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

### **BACHELOR OF ENGINEERING IN CIVIL ENGINEERING**

**Sponsored by Karnataka State Council for Science and  
Technology**



**KSCST**

**Submitted By**

<b>Name</b>	<b>USN</b>
<b>AMARANATH V A</b>	<b>4AL13CV013</b>
<b>SHASHANK S</b>	<b>4AL13CV131</b>
<b>NAYANA K</b>	<b>4AL14CV055</b>
<b>PRAJNA</b>	<b>4AL14CV060</b>

**Under the Guidance of  
Dr. H G UMESHCHANDRA  
ASSOCIATE PROFESSOR  
DEPARTMENT OF CIVIL ENGINEERING**



**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY  
SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI – 574 225.**

**2017-2018**

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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

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

DEPARTMENT OF CIVIL ENGINEERING

## Certificate

This is to certify that following students

Name	USN
AMARANATH V A	4AL13CV013
SHASHANK S	4AL13CV131
NAYANA K	4AL14CV055
PRAJNA	4AL14CV060

Has submitted Final report on "CONTAMINATION OF SOIL AND GROUND WATER THROUGH LEACHING OF SEWAGE AND INDUSTRIAL WASTE WATER FROM UNLINED DRAINS IN MANGALORE" for VIII Semester Bachelor of Engineering in Civil Engineering during the academic year 2017-18. The final report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

  
23/5/18  
Dr. H G Umeshchandra

Project Guide

  
23/5/18  
Prof. H Ajith Hebbar

HOD.

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

  
Dr. Peter Fernandes

PRINCIPAL

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

Name of the Examiners

Signature with Date

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CONTAMINATION OF SOIL AND GROUND WATER THROUGH  
LEACHING OF SEWAGE AND INDUSTRIAL WASTE WATER FROM  
UNLINED DRAINS IN MANGALORE

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**ABSTRACT**

Mangalore, one of the fastest growing and developing city in Karnataka. Most of the drains in Mangalore are unlined and hence the risk of ground water contamination and soil contamination increases in many folds. In light of that the study the area selected for investigation comprises a Industry, commercial and Residential areas in Mangalore. The collected samples of ground water and soil sample were analysed for parameters like pH , Nitrates, Chlorides, Sulphate, Carbonates and Bicarbonates, Electrical conductivity, Total dissolved solids, Sodium and Potassium etc. The soil sample were analysed for pH, Specific gravity test etc. At some places it is noticed that the quality of the water is getting deteriorated due to the leaching of sewage water. The soil degradation occurred at some places adjacent to the unlined drainages in most of the locations where the soil samples were collected.

**Key words:** unlined drainage, groundwater contamination, soil degradation, sewage water