KSCST

Karnataka State Council for Science and Technology

Indian Institute of Science Campus, Bengaluru - 560 012

Telephone: 080-23341652, 23348848, 23348849 ♦ Telefax: 080-23348840

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

Mr. H. Hemanth Kumar
Executive Secretary

16th March 2020

Ref: 7.1.01/SPP/953

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

Dear Sir/Madam,

Sub : Sanction of Student Project - 43rd Series: Year 2019-2020
Your Project Proposal Reference No. : ***43S_BE_0131***

Ref : Your Project Proposal entitled " ***A FEASIBILITY STUDY ON CONSTRUCTED WETLANDS FOR TREATMENT OF DOMESTIC WASTEWATER AT AIET CAMPUS***

We are pleased to inform that your student project proposal referred above, has been approved by the Council under "Student Project Programme - 43rd Series" with a budgetary break-up as detailed below:

Student/s	Mr. Tejus H	**Budget**	
	Mr. Sathish B R	**Particulars**	**Amount(Rs.)**
	Mr. Sachin Shriragapur	Materials/ Consumables	4,000.00
	Mr. Vikhyat B Basanagoudr	Labour	-
Guide/s	Dr. H Ajith Hebbar	Travel	-
	-	Miscellaneous	500.00
Department	Civil Engineering	Report	500.00
		Total	**5,000.00**
	Five Thousand Rupees only		

The following are the guidelines to carryout the project work :

a) The project should be performed based on the objectives of the proposal sent by you.

b) 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.

c) 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.

d) Please quote your **project reference number printed above** in all your future correspondences.

e) **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 :

1) Title of the project
2) Name of the College & Department
3) Name of the students & Guide(s)
4) Keywords

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

43S_BE_0131

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 through crossed cheque to the Principal. Please furnish the bank account details as per the format enclosed with this letter.

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,

(H. Hemanth Kumar)

Copy to:
1) The Head of the Department of
Civil Engineering
Alva'S Institute Of Engineering And Technology,
Moodbidri - 574 225.

2) Dr. H Ajith Hebbar
Department of Civil Engineering
Alva'S Institute Of Engineering And Technology,
Moodbidri - 574 225.

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

3) The Finance Officer, KSCST, Bengaluru

Encl: As Above

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

"A FEASIBILITY STUDY ON CONSTRUCTED WETLANDS FOR TREATMENT OF DOMESTIC WASTEWATER AT AIET CAMPUS"

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

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING
Submitted By

Name	USN
TEJAS H	4AL16CV096
SATHISH B R	4AL16CV084
SACHIN SHIRAGAPUR	4AL16CV077
VIKHYAT B BASANAGOUDR	4AL16CV103

Under the Guidance of

DR. H AJITH HEBBAR

Head of the department

Dept. of Civil Engineering

ALVA'S
Education Foundation

DEPARTMENT OF CIVIL ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE

Certified that the project work entitled "A FEASIBILITY STUDT ON CONSTRUCTED WETLANDS FOR TREATMENT OF DOMESTIC WASTE WATER AT AIET CAMPUS" is a bona fide work carried out by,

TEJAS H	4AL16CV096
SATHISH B R	4AL16CV084
SACHIN SHIRAGAPUR	4AL16CV077
VIKHYAT B BASANAGOUDR	4AL16CV103

in partial fulfilment for the award of BACHELOR OF ENGINEERING in CIVIL ENGINEERING of the VISVESVARAYA TECHNOLOGICAL 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.

Signature of Guide	Signature of HOD	Signature of Principal
Dr. H Ajith Hebbar	Dr. H Ajith Hebbar 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.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

The constructed wetlands have evolved into a reliable wastewater treatment technology for various types of wastewater. The classification of constructed wetlands is based on: the vegetation type (emergent, submerged, floating leaved, free-floating); hydrology (free water surface and subsurface flow); and subsurface flow wetlands can be further classified according to the flow direction (vertical or horizontal). In order to achieve better treatment performance, namely for nitrogen, various types of constructed wetlands could be combined into hybrid systems.

Natural wetlands are being considered beneficial for food and habitat for wildlife, water quality improvement and shoreline erosion control. However during Past few decades it has been observed that the planned use of wetlands for meeting wastewater treatment and water quality objectives has been seriously studied and implemented in a controlled manner. Constructed wetland system (CWS) for wastewater treatment have been proven to be effective, low cost and sustainable alternative for conventional wastewater treatment technologies. The removal of pollutants in these systems relies on a combination of physical, chemical and biological processes that naturally occur in wetlands and are associated with vegetation, sediment and their microbial communities.

Keywords: Wetlands, plant uptake, chemical degradation, plant species, dissolved oxygen.