# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

# PROJECT REPORT ON

# "THREE IN ONE SMART AGRO DEVICE"

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

**BACHELOR OF ENGINEERING**
**IN**
**ELECTRONICS & COMMUNICATION ENGINEERING**

**Submitted By**


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**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOODBIDRI – 574 225.**


**2018-2019**

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

**MOODBIDRI – 574 225**

(Affiliated to VTU, **BELAGAVI**)

**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

# CERTIFICATE

*"ertified that the project work entitled "***THREE IN ONE SMART AGRO DEVICE***" is a bona ide work carried out by*

| | |
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2018–2019. 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 the Guide** | **Signature of the H.O.D** | **Signature of the Principal** |
| **Mr. Sudhakara H M** | **Dr. D V Manjunatha** | **Dr. Peter Fernandes** |
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# ABSTRACT

The half of the population depends on agriculture for its livelihood. During a sprinkler irrigation water is lost due to wind drift and evaporation. This problem can be seen in fertigation as well as pesticides spraying. Therefore innovative irrigation practices can enhances water efficiency, gaining an economic advantage while also reducing environmental burdens. In some cases the necessary knowledge has been provided by extension services, helping farmer to adapt and implement viable solutions, thus gaining more benefits from this technology.

The existing systems employ SMS based system for keeping the user continuously informed of the conditions of the field. The objective of this project is to design a simple, easy to install embedded circuit to monitor the fertilizer and pesticides to be sprayed which are used to control and optimize them to achieve maximum plant growth and yield. The Arduino will communicate sensors, Bluetooth and GSM module in real time in order to control the irrigation process efficiently inside a field by actuating a motor according to necessary condition of the crop. An integrated LCD is also used for real time display of data acquired from the sensor and the status of the various devices. The design is quite flexible as the software can be modified any time. This makes an efficient system for optimization of yield with minimum use of water. This system is also economical, potable and user friendly.