

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi – 590 010



## PROJECT REPORT ON

### **“SOLAR BASED PESTICIDE SPRAYER”**

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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**USN**  
**4AL12EC075**  
**4AL12EC082**  
**4AL12EC089**  
**4AL13EC412**

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**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**  
**ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY**

**MOODBIDRI – 574 225.**

**2015-2016**

# ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI - 574 225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

## CERTIFICATE

*Certified that the project work entitled "SOLAR BASED PESTICIDE SPRAYER" is a bonafide work carried out by*

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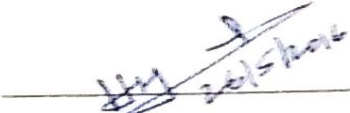
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2015-2016. It is certified that all corrections/suggestions indicated 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  
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Signature of the Principal  
Dr. Peter Fernandes  
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Name of the Examiners

Signature with date

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## **ABSTRACT**

Agriculture is a profession of many tedious processes and practices, one of which is the spraying of pesticides in the fields. Worldwide there are about 250,000 species of plants. Farmers spray pesticides to mitigate crop damage caused by pests. A pest is any biological organism, including weeds, pathogens, and arthropods, that interferes with the production of crops affecting quality and yield. Insect pests can have large and irreversible effects on crops and yields, which can impact consumers through higher crop prices. The conventional methods are a person carrying a sprayer and manually actuating a lever to generate pressure and pump the pesticide through a tube or a mobile vehicle carrying an inbuilt compressor and sprayer unit which has to be manually driven by a human operator. Major drawback in human operated systems is that the operator is exposed to the harmful chemicals while spraying. Long term exposure, as in this case, can be extremely detrimental to the operator's health. This is a project which can be viewed as an alternate to these methods. In this project a remote controller is used to operate the pesticide sprayer. The vehicle is powered using an onboard solar powered battery which brings down the running cost. The control of the vehicle is achieved using an inbuilt microcontroller unit which is programmed to operate according to the receive instructions from the remote controller.