

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELGAUM-590014**



*Project Report*

**On**

**“A ROBOTIC BASED GREENHOUSE PARAMETER MONITORING  
AND CONTROL SYSTEM USING ZIGBEE”**

**(Sponsored by Karnataka State Council for Science & Technology)**

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

**BACHELOR OF ENGINEERING**

**IN**

**ELECTRONICS AND COMMUNICATION**

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## **ABSTRACT**

For any crop to yield best, it requires certain climatic conditions like temperature, light intensity, moisture content of soil, pH and soil type. But we cannot satisfy all requirements of crops at all the times which may affect the yield of crop. This can overcome by growing them in enclosure under strict conditions. Greenhouse management plays a vital role in determining the commercial gain from this occupation. Hence this project is an effort to improve the present working state of Green Houses.

The project consists of temperature, humidity & light monitoring and controlling this is based on ZigBee technology. This unit is installed on a Robot which moves through the greenhouse on a predefined track.

A display unit will show the values of parameters like Temperature, humidity and Light. This will help for the person to know the values, for this purpose we are going to use various sensors, which will be connected to ADC.

The other module is named as parameter controlling. It can be used to control the values of temperature, humidity & light. We are going to use Driver circuit for this purpose. which should be connected to a Fan ,Motor and Light. This system is useful as many times it's difficult to measure and control the parameter values manually and also this module is more accurate than the domestic greenhouse system.

Robot is given a predefined motion depending upon the track of greenhouse. Robot will move throughout the greenhouse. Then it will measure the values of temperature, humidity and light while traveling through the greenhouse. At the same time controlling section will control the values of these parameters.