ABSTRACT

Hydroponics is a type of soil-less agriculture. This project is a model of the actual system. Soil loses its nutrients and fertility with time, so to avoid that we can employ the method of hydroponics. In this project, three criteria for plant growth i.e. moisture, light, and temperature are being controlled and monitored. For light control, an array of 16 LEDs, 8 red and 8 blue are placed above the growing plant and the light intensity is calculated using a light sensor with an LDR. The temperature of the model is controlled with the help of two fans and one incandescent bulb. The fans are controlled with the help of a motor drive and the incandescent lamp is controlled with the help of a relay. The temperature and humidity are measured using a DHT22 sensor. Water is supplied through a pump that enables water recycling.