



**NARNARAYAN SHASTRI INSTITUTE OF TECHNOLOGY  
ELECTRICAL DEPARTMENT**



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**Internal Guide:- Mr. Ronak Govindbhai Prajapati**

**Project Title:- INTELLIGENT TRAFFIC CONTROL SYSTEM MICROCONTROLLER BASE**

**Abstract:-**

A development of an intelligent traffic control system (ITCS) system needed because present traffic light controllers are based on old microcontroller such as AT89C51 which has very less internal memory and no in-built ADC. These systems have limitation because they will use the predefined program that does not have the flexibility of modification on real time application. The present traffic system have fixed time interval for green and red signal which does not provide the flexibility to the system. The ITCS system consist of high-performance, low power AVR\_32 microcontroller with 32kbytes of in-system programmable flash memory and inbuilt 8-channel, 10-bit ADC which is required to process the IR input from sensor network. The ITSC system will able to deal two basic problem of traditional traffic light system: i) Detection of traffic volume by using genetic algorithm. ii) Emergence vehicle detection such as ambulance, police etc. by using wireless sensor network (IR) embedded at the signal intersection.

**Major Hardware components used:-**

Microcontroller AT89C51, Motes, LM7805, Transformer 12-0-12

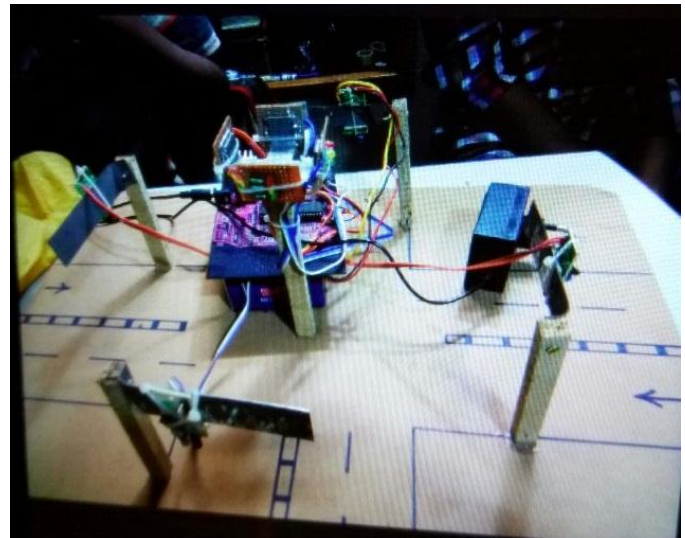
**Software used:- KEIL**

**Project Application:-**

(1) Automatic Traffic control system in cities

**Approx. Project Cost:- 12000**

**Project Photo:-**



**Block /circuit Diagram:-**

