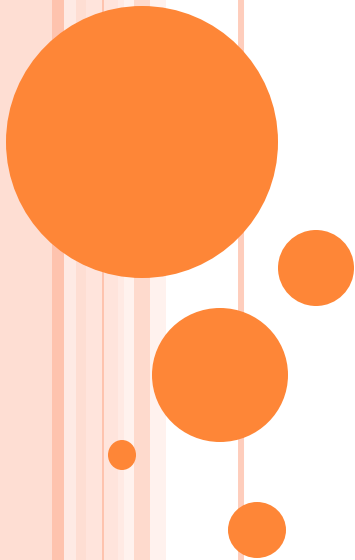# DIGITAL IC TESTER

INTRODUCTION

- This project implements a digital IC tester using an Arduino. The checking of the IC will be done using Arduino UNO. LED lights are there to show whether the IC is good or damaged. LCD display shows about the working condition of each gates in the IC and displays whether the IC is faulty or not. The main IC that are going to be checked are OR (7432), AND (7408), NAND (7400), EXOR (7486) and EXNOR (747266).

LITERATURE REVIEW

o Functional Testing

A functional test exercises the actual operation of the digital logic design through the various functional operations that it is intended to undertake. Functional testers apply a set of stimuli to input pins of a DUT and sample the response at the output pins after sufficient time has elapsed to permit signals to propagate and settle out. The tester will then compare the sampled response to the expected response which will determine whether the DUT responded correctly to the applied stimuli.
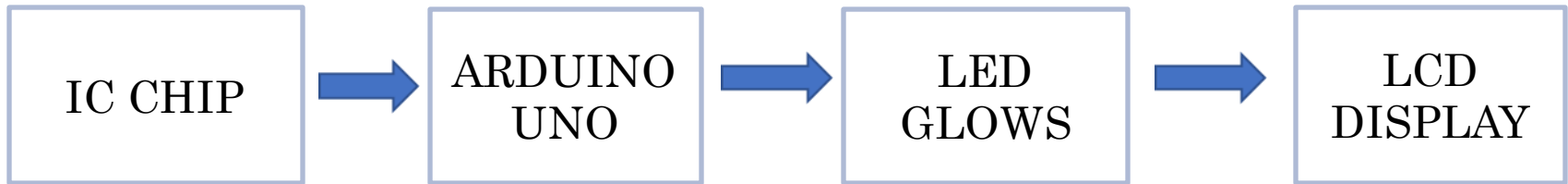
OBJECTIVES

- The main purpose of this project is to check logic gate IC, whether the IC is working properly or not. The checking of IC will be done using Arduino UNO.

BLOCK DIAGRAM

| IC CHIP | → | ARDUINO UNO | → | LED GLOWS | → | LCD DISPLAY |

COMPONENTS

- Arduino UNO R3
- LCD Display
- Zif Socket
- PCB board
- I2C module
- Preset
- Jumper Wires
- LED
- Resistor

PROGRESS

- Testing of all modules was done.
- Interfacing of all modules was done.
- Coding completed.
- Testing of IC done using Digtal IC Tester.
- IC Tester shows corresponding output through LED and LCD display.
- It checks all the gates of IC and displays the result. For good IC ,the green LED becomes ON and LCD display shows the correctness of each gates in the IC.
- In case of damaged IC, it correctly shows which gate of the IC is faulty in LCD display and red LED will become ON.

REFERENCE

- http://www.iitk.ac.in/eclub
- http://www.computernerdkev.heliohost.org/icteste rs/index.htm