



2019-2020

Name of the Department/Society: LUMEN

Name of the event 3: Digital Electronics Workshop

Date of the Event: 24th October 2019

A good designer must rely on experience, on precise logical thinking and on pedantic exactness. To enrich the experience in digital circuits; LUMEN organized a workshop which was hosted by Dr. Sukhbinder Singh Rait. It was hosted on 24th October, 2019 where students from both Physics and Electronics department got hands on experience in digital circuits.

The Workshop covered basics of Digital Electronics followed by practical experiments in which the students implemented real time applications of logic gate. The workshop was an introduction of the students to the world of digital electronics starting with the basic of logic gates. The workshop was planned out as per the past experiences of the teachers and students during the practical sessions related to the subject. Theoretical topics were briefly discussed with major focus on the practical implementation of the circuits. It started with the initial testing of the digital ICs. We have an in house designed digital IC tester (designed by Dr Sukhbinder himself) for testing different digital ICs. The students were taught how to use the IC tester as it forms the first preliminary check of any digital practical session (if the IC is bad it is rejected else if good it is used in the circuit). Once the ICs test good, the student can proceed to design of the circuit on the breadboard. On completing the wiring the students were instructed to how to apply the inputs and obtain the outputs. The use of LEDs as output indicators along with their current limiting resistor and it calculations was discussed with the students. Later the students were briefed about the debugging of the circuits and the concept of clocked circuits and connections of unused inputs for fail safe performance were also discussed. They were also briefed about the various hardware operating parameters of the digital ICs. On completion of the workshop the students were awarded with participation certificates.





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