

Department: Electrical and Electronics Engineering
List of Experiment
BEE453- DIGITAL ELECTRONICS LAB

1. Introduction to digital electronics lab- nomenclature of digital ICs, specifications, study of the data sheet, Concept of Vcc and ground, verification of the truth tables of logic gates using TTL ICs.
2. Implementation of the given Boolean function using logic gates in both SOP and POS forms.
3. Verification of state tables of RS, JK, T and D flip-flops using NAND & NOR gates.
4. Implementation and verification of Decoder using logic gates.
5. Implementation and verification of Encoder using logic gates.
6. Implementation of 4:1 multiplexer using logic gates.
7. Implementation of 1:4 demultiplexer using logic gates.
8. Implementation of 4-bit parallel adder using 7483 IC.
9. Design, and verify the 4-bit synchronous counter.
10. Design, and verify the 4-bit asynchronous counter.
11. Implementation of Mini Project using digital integrated circuit's and other components.

Note: Any two experiments from above list should also be performed by students on Virtual Lab.

LIST OF EQUIPMENT ANALOG & DIGITAL ELECTRONICS LAB
Digital Multimeter
DSO
SCR Kit
Common Base Transistor Characteristics Kit
FET Characteristics Kit
MOSFET Characteristics Kit
HW, FW & Bridge Rectifier Kit
Transistor as a Switch Kit
OPAMP Characteristics Kit
Application of OPAMP Kit
Instrumentation Amplifier Kit
RC Coupled Amplifier Kit
Digital Trainer Kit