B.Sc. (Electronics) SEMESTER II

Paper II

(Advanced Digital Electronics)

Unit I

Logic Families: Introduction to ICs Scale of Integration
https://www.youtube.com/watch?v=_0j0gNyUBmc

Classification digital ICs, Construction and Working of TTL, NAND and NOR gates
https://www.youtube.com/watch?v=6Zd582d-PfU

Construction and Working of CMOS NAND and NOR gates, Tristate logic, Comparison of TTL and CMOS
https://www.youtube.com/watch?v=orNRyYhOtG8

Unit II
Binary Counters:
https://www.youtube.com/watch?v=Mxfsl5dhsyo

Types, Asynchronous; up/down, Decade, Modified and Synchronous counter, Construction, working, Truth tables and timing diagrams (4 bits), Uses.
https://www.youtube.com/watch?v=sdQO4ryAovs
https://www.youtube.com/watch?v=qBhP0-8g4AA
https://www.youtube.com/watch?v=r80M7hOpzhA

Ring Counter,
https://www.youtube.com/watch?v=esFP48kLxuw

Johnson counter;
https://www.youtube.com/watch?v=r80M7hOpzhA

Unit III

Shift Registers: Introduction, Buffer Register, Controlled Buffer Register, Data Transmission in shift registers; Construction and Working of Serial-in serial-out, serial-in-parallel-out, Parallel-in serial-out, Parallel-in Parallel-out, Right Shift and Left Shift, Uses.
https://www.youtube.com/watch?v=NjMX4hohyRI

Unit IV

Memory Organization: Types of RAM and ROM, Characteristics of Memory, Systems, Memory Hierarchy,
https://www.youtube.com/watch?v=oBMj77ONeH8

Main Memory, Organization; Address & data bus, RAM, Memory expansion; address and data size using address table method.
https://www.youtube.com/watch?v=YVObWiciVgw

Static and dynamic
https://www.youtube.com/watch?v=a1XIt_mMIPU