

Lecture Plan

Name of Subject: Digital Electronics

Class: B.Tech. (EIC)

Semester: Fourth

Unit/ Section No.	Name of Topic	Number of Lectures Required
1	Digital signal, Gates-AND,OR, NOT, NAND, NOR, EX-OR, EX-NOR, Boolean Algebra,	02
1	Number system, Binary codes- BCD, XS-3, Gray, EBCDIC, ASCII, Error detection & correction code.	03
2	Design using gates, Karnaugh Map.	03
2	Tabular method.	02
3	MUX, DEMUX, Decoders.	03
3	Adders/ Subtractors, BCD Arithmetic circuits.	02
3	Encoders, Decoders/Drivers for display devices.	02
4	Flip-Flops: S-R, J-K, T, D, Master-Slave, edge triggered, F/F Conversions.	03
4	Shift registers, Sequence generator, Counters- Synchronous & Asynchronous, Ring counter and Johnson Counter.	02
4	Design of synchronous & asynchronous counter.	02
5	Switching mode operation of p-n junction, BJT, MOS devices.	02
5	RTL, DTL, DCTL, HTL, TTL, ECL, MOS & CMOS logic families.	04
5	Tristate logic, interfacing of CMOS & TTL.	02
6	Sample & Hold circuit, Weighted resistor, R-2R ladder DAC, Specifications.	02
6	ADC- Quantization, Parallel comparator, Successive approximation.	02
6	Counting type, Dual slope ADC, Specifications of ADC.	02
7	Classification of memories- RAM organization 1- Bipolar RAM cell- MOSFET RAM cell- Dynamic RAM cell	03
7	ROM-PROM-EPROM-EEPROM-EAPROM	02
7	PLDs – PLA,PAL,	02
7	FPGA	01