A.D.COMPUTER TRAINING CENTER
An ISO 9001:2015 Certified Organization
Enrolled With Ministry of Micro, Small, and Medium Enterprises (MSME)
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Digital Electronics Syllabus

Module 1: Number Systems & Codes

- Decimal, Binary, Octal, and Hexadecimal number systems.
- Conversions between different number systems.
- Binary arithmetic operations.
- BCD, Gray, and Excess-3 codes.

Module 2: Logic Gates and Boolean Algebra

- Basic logic gates: AND, OR, NOT.
- Universal gates: NAND, NOR.
- Boolean algebra laws and theorems.
- De Morgan's theorems.
- Simplification of Boolean expressions.

Module 3: Combinational Logic Circuits

- Design and analysis of adders, subtractors, multiplexers, demultiplexers, encoders, and decoders.
- Implementation of combinational logic using logic gates.

Module 4: Sequential Logic Circuits

- Flip-flops: SR, JK, D, and T types.
- Registers and counters: asynchronous and synchronous.
- Design and analysis of sequential circuits.

Module 5: Memory and Programmable Logic Devices

- Introduction to RAM, ROM, PROM, EPROM, and EEPROM.
- Programmable Logic Arrays (PLA) and Programmable Array Logic (PAL).