

Topics of fundamental exam

Digital Electronics

Date: 2017.05.11

- 1.) Properties and internal structure of logic gates; TTL and CMOS voltage levels; basic logic integrated circuits.
- 2.) Typical combinatorial networks: multiplexer, demultiplexer, half-adder, full adder
- 3.) Definition and types of hazard phenomena; methods for eliminating hazards.
- 4.) Basics of sequential networks: definition, types, models.
- 5.) Design methods of sequential networks: state table, state diagram.
- 6.) Basics of RAM and ROM memories.
- 7.) Basics of microprocessors and computer systems: internal structure, statement execution, types of microprocessors.

Types of examples:

- Simplification of logic functions
- realization of logic functions
- Design of typical combinatorial networks
- Design of typical sequential networks