1. Present the given number in the NBC, BCD, 1's complement, 2's complement codes
2. Present the given number in hexadecimal code
3. Present the given number as negative in the 2's complement
4. Perform simple calculations for two numbers in the 1's complement
5. Perform simple calculations for two numbers in the 2's complement
6. Multiplication of two binary numbers (Booth's multiplication algorithm)
7. Adding two numbers in the BCD or EXCESS-3 code
8. Negating numbers in the BCD or EXCESS-3 code
9. Describe AND, OR and XOR gates,
10. Describe XNOR, NAND and NOR gates
11. Present a circuit built of gates that will perform a specific function (depending on the appropriate combination of input data)
12. Describe a full adder adding two bits,
13. Present a scheme of magnitude comparator that comparing two binary values (equality, and which of them is larger) and describe comparators,
14. Describe an encoder,
15. Describe a SR flip-flop,
16. Describe a D flip-flop and T flip-flop,
17. Describe a multiplexer and demultiplexer,
18. Present a Karnaugh map for a given function, minimize it, write canonical normal forms (product and summative) forms of a function after minimizing it, draw a diagram,
19. Describe static-hazards.

What should be in the test:

* flip-flops (it may be without a clock input): symbol, state diagram, state table, description.
* full adder/comparator/encoder: truth table, logic diagram/ciruit, truth table, description,
* multiplexer/demultiplexer: logic diagram/ciruit, symbol, truth table, description,