

1. Draw schema of von Neumann and Harvard computer architecture. Explain principles how computer works (defined by von Neumann). The communication with devices was later improved by DMA (Direct Memory Access). How DMA work, add it to computer schema and explain functionality. (12)

2. Describe common construction features of RISC processors. Describe how that features improved processors performance. Which types of RISC processors you know? (12)

3. Describe history of Intel x86 processors. (11)
4. Draw and explain operation principles of LCD displays. Describe difference between TN and IPS technology. Describe advantages and disadvantages of that technology. (10)
5. Draw and describe hard disk, its construction and how it works. Describe physical principles how the information is written and read. (10)