

QUESTIONS OF CHAPTER 1

1. Which is the most significant contribution of the Babbage machine proposed in the S. XIX? In your opinion, Why was the machine of Babbage never built?
2. As you known, history of computing epoch can be divided in six different periods. Each of one is triggered by a specific technological development. According to this, describe the technological development, which is the origin of each new period.
3. Which is the oldest technological company in the world?
4. Which was the first electronic computer built in the world?
5. What invention allowed to evolution from the electro-mechanical computers to the electronic computers?
6. Which is the most significant contribution of the EDVAC computer?
7. During the second generation, why were some of the most significant technological start-ups built in Palo-Alto?
8. Which is the most significant contribution of the Cray company?
9. What are the most significant advantages of the MOS transistor in relation to the bipolar transistor?
10. Experts say that Moore Law will reach the saturation during this decade. Which is the basis of this statement?
11. Which are main characteristics of the 4004 microprocessor developed by Intel during the fourth generation?
12. What is the best-selling PC ever?
13. During the fifth generation the challenge is not only to integrate more transistors/chip, but to make them work more efficiently. Enumerate three examples of inventions introduced by manufacturers of personal computers to achieve this aim.
14. How many FLOPS are 1 GFLOP, 1 TFLOP, 1 PFLOP and 1 EFLOP:
15. How is the supercomputer performance measured?
16. Which year was Petaflop barrier broken? Which did the supercomputer break this barrier?

17. Which is the most significant technological contribution of the Tianhe supercomputer, top one in the list top500 of 2010?
18. How does a GPU work?
19. Which is the main novelty of the list top500 of 2012?
20. Which is the best supercomputer taking into account the balance between performance and consumption?
21. In the last ranking of the 500, which is the most used model of GPU, processor and network?
22. What do you expect to learn in the subject of High Performance Computing?