CS2021 Assignment 2 Answers

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1. What was the original use of computers?

   Answer: The original use of a computer is for computing.

2. What were the "first generation" of electronic computers made of?

   Answer: They were made of vacuum tubes.

3. In World War II, what a computer was used for and which countries had computers?

   Answer: Computer was used for (i) breaking the encryption code that was used by the German army in protecting the messages sent by radio signal and (ii) designed weapons, like atomic bombs.

   During World War II, at least US, UK and German had computers.

4. What are the names of these computers? [Answer could be found in the lecture note "History of Computer".]

   Answer: In US, the computer is called ENIAC. In UK, the computer is called Colossus. In German, the computer is called Z3.

5. What is the contribution of Alan Turing in World War II?

   Answer: Design the program that can break the encryption code that was used by the German army.

6. What is the name of the first commercial computer in US and which company finally made it?

   Answer: The first commercial computer in US is called the Univac. Remington Rand made it and released it to the market.

7. When did IBM enter the computer business and who was the key person to make this change?

   Answer: In 1954, the first mass manufactured computer IBM704 was introduced to the market. The key person for this move is Thomas Watson Jr who was the president of IBM at that time.

8. In UK, which company made the first commercial computer and what is the name of this computer?

   Answer: J. Lyons & Co. made the first commercial computer called Lyon Electronic Office (LEO) for the market.

9. What are the social effects of computers in factory and office automation?

   Answer: On one hand, computers and office automation technologies were applied to do various types of manual works, like data filing and typing. So that, the productivity of a firm or factory was improved. On the other hand, many labors were laid off because their jobs were replaced by computers and automation technologies.

10. When did Apple design her first computer?

    Answer: The first Apple computer was designed in 1975, when Steve Wozniak had attended the first meeting of the Homebrew Computer Club in Gordon French's garage. In 1976, Apple released its first computer kit, called Apple I.

11. When was the device 'mouse' designed and who designed it?

    Answer: Mouse was invented by Douglas Engelbart in Stanford Research Institute (SRI) around 1968.

12. What is ALTAIR 8800 and when did it appear in the market?

    Answer: The MITS Altair 8800 is a microcomputer designed in 1974 based on the Intel 8080 CPU.

13. What is the contribution of Xerox in the evolution of computer?

    Answer: It developed the first graphical user interface with mouse for controlling a computer.

14. Why Xerox did not manufacture computer?

    Answer: Xerox is known for its photocopying machines. The public might not believe that a photocopier manufacturer is able to make good computer.

15. When did IBM design her first personal computer?

    Answer: The first IBM personal computer IBM 5100 was introduced in 1975. The major problem is that the price of a PC was very expensive. The selling price of IBM 5100 was about USD20000.

16. Apart from expensive pricing, what other factor led the first generation of IBM PC fail in the market?

    Answer: One major problem is that the computer is not user-friendly. At that time, the interface to control the operating system was based on text-command. Users always needed to look up the instruction manual for the commands for the use of a computer.

17. What is the key feature of Macintosh making it very difference from other PCs appeared in 1984?

    Answer: By the use of a mouse, a graphical user interface (GUI) was embedded in a Macintosh for the users to control the computer.

18. What are the technological advancements, both in hardware and software, from the first generation of electronic computers to the present computers?

    Answer: Hardware – Vacuum tube, memory, semiconductors (and then transistors), integrated circuits, microprocessors, mouse. Software – Machine code, programming language/complier, operating systems, graphical user interface, application software.

19. A program is a software that you can find in every computer and cell phone. What is a program?

    Answer: A program is a set of instructions that can command the computer to do things, like mathematical calculations, logical operations, data storage and retrieval.

20. How disables could be benefited from computer technologies?

    Answer: Special equipment can be designed by using computer technologies to facilitate disable persons in learning, living and problem solving.