

Reading Quiz 9

1. **Name any three people who contributed to early computer design & construction and what their contribution was.**

- Charles Babbage - He designed the Difference engine and analytical engine.
- Alan Turing - Made an abstract model of the computer called a Turing machine and essentially championed the idea of computability.
- John Von Neumann - Helped design the EDVAC which used binary representation unlike the decimal one of the ENIAC.

2. **What was one early replacement for the relay, and what are some of its drawbacks?**

One early replacement was the vacuum tube. It's drawbacks are that it is expensive, requires a lot of electricity and produces a lot of heat. They also eventually burned out meaning they had to be replaced periodically.

3. **What does it mean to dope a semiconductor?**

Doping a semiconductor means to add certain impurities to it resulting in either a P-type or N-type semiconductor.

4. **What is special about quartz that makes it a good candidate for use in an oscillator?**

They vibrate in very specific frequencies usually at least a million cycles a second.

5. What is special about the Intel 4004?

It was the worlds first microprocessor.

6. Explain how why "all digital computers are the same?"

Because at the very simple level, they all work with flipping bits to on or off.