Computer Architecture – Two

1. The minimum seek time for an HDD is 9msec, and the maximum seek time is 90msec. The block size of this HDD is 4KB. How long on average does it take to read 100MB of data?
2. A screenshot of a cell phone

   Description generated with very high confidenceDescribe a TCP/IP packet in detail. Describe the header, how many bytes it is, and which components it contains. What data can come after the header?

Minimum: 20 bytes

Maximum: 60 bytes

After the header comes the data.

1. How does the network protocol guarantee that a TCP/IP packet is complete after transmission?

By sending an acknowledgement (ACK) if the ACK is not received in a set length of time the packets are resent to the destination.

1. What is the difference between TCP and IP?

TCP is responsible for the delivery of data packets and IP is responsible for the actual address that TCP will be communicating with.

1. Why is 3d performance so much higher with a graphics card than without? Modern CPUs are extremely fast, what is limiting their performance?

The graphics card has it’s own memory (VRAM), therefore the graphics card doesn’t need to share memory with the CPU makes it much more efficient.