a. Socket - he connector on the motherboard that houses a [CPU](#) and forms the electrical interface and contact with the CPU.

b. Frame – structure used to divide knowledge into substructures

c. DNS - naming system for computers, services, or any resource connected to the internet/private network

d. Packet sniffing – program or piece of hardware that can intercept and log traffic passing over a digital network.

e. HTTP – Hypertext Transfer Protocol – application protocol for distributed, collaborative hypermedia information systems, foundation of data communication for the world wide web.

f. MIME types - multi-purpose Internet Mail Extensions – form a standard way of classifying file types on the internet,so they can transfer files of the same type in the same way.

2. Why would more and more content on the WWW be dynamic rather than static? Briefly discuss the tradeoffs involved.

        Static – must republish when changes are made or viewers will not see updates

        Dynamic – you don't have to immediately republish when updates are made for the viewer to see changes

3. What two things must an internet protocol do?

        Provide naming scheme – defines format for host addresses

        Provide delivery mechanism – defines standard transfer unit (packet – consists of header & payload)

4. Which would be a more appropriate choice, typically, for implementing a VOIP solution – UDP or TCP?

        Because we're concerned more about keeping the stream of information going rather than the order it comes in UDP is better for voip. TCP guarantess delivery of data

5. Why does designating a service as a socket pair (`IP_Address:Port_Number`) limit scalability and reliability?

6. What would you expect to be the bottleneck for a web server primarily serving out lots of static HTML documents that "feels slow/sluggish:" (a) another CPU, (b) faster storage, or (c) a faster Internet connection?

        CPU – because most of the time spent processing the html is done using the cpu (parsing & executing the html document)

7. What would probably the most effective way to speed up a web server which does many random read-only lookups into a 3GB database, returning 1KB-2KB of HTML as the result for each lookup, assuming the Internet connection is nowhere near saturated?

        Combine pages to make less lookups

8. Why would you want to make an I/O bound WWW server multithreaded on a single-core system?

        By making the serve multithreaded, you allow it do other tasks while its waiting on I/O to be processed.

9. Why is MAC-address-based authentication such a bad idea?

        MAC addressed too easy to spoof

10. How can a proxy located on the KSU campus accelerate web access to services provided by web sites like YouTube or Sports Illustrated?

        Proxy's typically retain information in their cache longer (and hold more) than a normal web browser, resulting in dramatic performance increases for popular websites.