

+Questions:

- 1. Vint Cert has described the Internet as a homogenous network that connects heterogeneous computers. What does that mean?**
 - a. He is describing the connection of different architectures (hardware/OS/etc) to a network using the same protocol.
- 2. What is Metcalfe's Law?**
 - a. States that the value of a telecom network is proportional to the square of the number of connected users on that system.
- 3. Where geographically are the majority of Internet users located?**
 - a. Continent of Asia.
- 4. Concerning the Internet, with what are mobiles helping?**
 - a. Providing Internet connectivity to more users/places
- 5. In design terms, what differentiates the Internet from earlier networks such as the Telephone and Telegraph networks?**
 - a. The Internet was initially an experimental design with no large infrastructure in mind like the telephone and telegraph.
- 6. Was there a particular logic in Vint Cert's choice of a 32-bit address space for IPv4 addresses?**
 - a. No, he simply chose a 32-bit address space because he didn't think it would ever be used up.
- 7. How do digital signatures relate to closing an important vulnerability in the DNS system?**
 - a. Digital signatures confirm the connection between names and DNS.
- 8. What is a sensor network?**
 - a. It consists of spatially distributed autonomous sensors to monitor physical or environmental conditions; such as temperature, sound, pressure, etc. and to cooperatively pass their data through the network to a main location. An example would be a seismograph.
- 9. Why is cloud collaboration important?**
 - a. Furthering cloud technology globally.
- 10. What is strong authentication? Why is the lack of it an issue?**
 - a. Authenticating each part of a connection to a network, the issue is accountability.
- 11. What does Cerf cite as a problem with the Internet and copyright?**
 - a. Copyrights were designed for physical objects, not digital information.
- 12. What does Cert mean when he talks about rotten bits?**
 - a. Bits that will not have a use in technology in the future.
- 13. Briefly describe the Inter-planetary Internet.**
 - a. Data transmission from one Earth to another planetary body using point to point connection.
- 14. In an Internet context, what is common carriage? What implication does it have for Internet billing?**
 - a. Common carriage is being billed for a service despite how much or how little was used. It implies that ISP's are unable to impose any systems to provide better or worse service for gain.
- 15. What does Cerf mean when he says that in the future, the network will disappear?**
 - a. That we will be connected in so many ways that it will become second nature and we won't have to think about the Internet or Networking the way we do today.