

I226 Computer Networks

Chapter 12 Design, Implementation, and Operation of Network Systems (Review Questions)

Each chapter includes a few questions that are designed to help you to revise your first-level understanding of the slide material presented in the lecture.

1. Describe the operational model of SNMP. Illustrate the components and protocols.
2. What are SMI and MIB? What kind of relationship is there between them?
3. What operations are required to maintain the deployed network?
4. What layer does VLAN technology belongs? Why?
5. Discuss the difference between port grouping VLAN and tagged VLAN? What can these technologies realize? Explain respectively.
6. When you connect an ordinary computer to an Ethernet port that belongs to only a tagged VLAN, that computer cannot communicate. Why?
7. Illustrate a VLAN configuration in which a physical port belongs to more than three subnets.
8. A physical port can belong to an untagged VLAN and plural tagged VLAN. Why the situations differ for tagged or untagged?
9. What kind of steps are there in a life cycle of a network system?
10. Discuss the issues that must be clarified before the design of a network system? Give some examples.
11. How can the speed of a line be calculated by the required response time for applications? Use a queuing theory, and give some examples.
12. Discuss the technologies to enhance the reliability of a network system.
13. Give the steps of evaluation of a network system.
14. Discuss the features of a collapsed backbone type centralized routing architecture and edge router type distributed routing architecture.
15. Discuss the advantages of the ring topology network for a viewpoint of reliability.
16. Explain the route aggregation mechanism. What would be the issues for address assignments when route aggregation is enabled?
17. What are “switching hub” and “layer-2 switch”? Why do they call this way?
18. Explain the hardware components of routers.
19. Discuss the critical issues for designing a high performance router. What technology is used?