985复习

2023年12月22日 7:30

选择

简答（70%）

概念

设计

计算题

不一定会有，网通流量

第一章

网络设计重要性，部分概念

第二章

简答题重点，哪些设备，哪些物理层，网络层模块，必考问题：这几层分别有哪些设备，有哪些功能，例如路由寻址，交换机网关，三种基本model，OSI和TCP/IP的对比，各自有什么区别以及详细组成，在后面设计里可能会有

第三章第四章

主观章节，考察较少，网络设计方法，需求分析，要知道概念，相应的有哪几种，需求分析有哪几种，主要需要解释概念

第五章

网络架构需要知道三个架构网络，在PPT开头有哪三种，在结构里充当了什么功能

第六章第七章

网络寻址，网络路由，作为所有大题出的主要的两章，涉及到简答题的内容，寻址和路由的区别是什么，计算IP地址，IP的类别ABCDE，网址有什么组成，网关怎么划分，给定IP段能不能区分是什么类型网络，如何转化成二进制表示，大概两三道，子网掩码计算，除了计算之外还有概念题，比如路由涉及的设备和功能，这两章是非常主要的内容，在路由这一块需要额外掌握路由网络，路由网络是重点讲解的，路由网络路由算法涉及哪些内容，如何选择，如何评估

第八章

安全方面，三元身份信息，CIA，了解经典的安全方面需要考虑哪些内容

第九章

网络设计，和第一章的概念很多是重复的，这一章额外需要了解网络设计的步骤流程是什么，如何评估，涉及哪些matrix，设备服务功能商如何评估网络的好坏

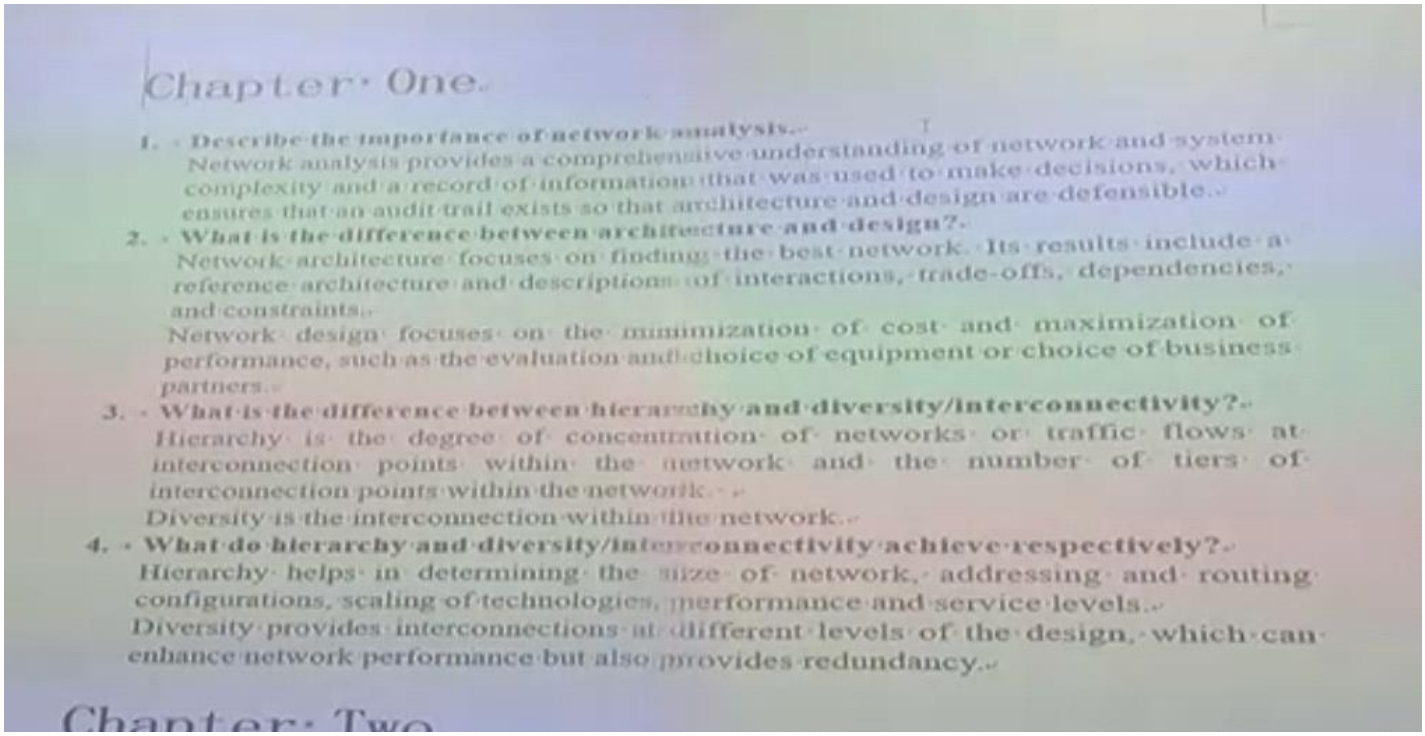
第十章

performance的架构，如何评估计算机网络设计的好坏，用QoS，涉及到哪些内容，除了67章涉及大题以外，其他需要掌握的是每一章的标题，是什么，里面有哪些基础内容，这些内容的功能和概念解释。

第十一章

工程类的方法，做一些了解，涉及到哪些内容，比如他的访问目标，评估目标，架构需要考虑的方面，另一个计算题可能从网络管理的架构里，如何控制网络流量的数据，以及网络流动架构的管理，比如有很多设备，不同端口转发的数据量不一样，如何计算，通过不同拓扑结构比如总线型，分布式，P2P网络，如何优化我现有的会造成拥塞的方式，这是另外一种可能出现的计算题，基本就考察这些内容

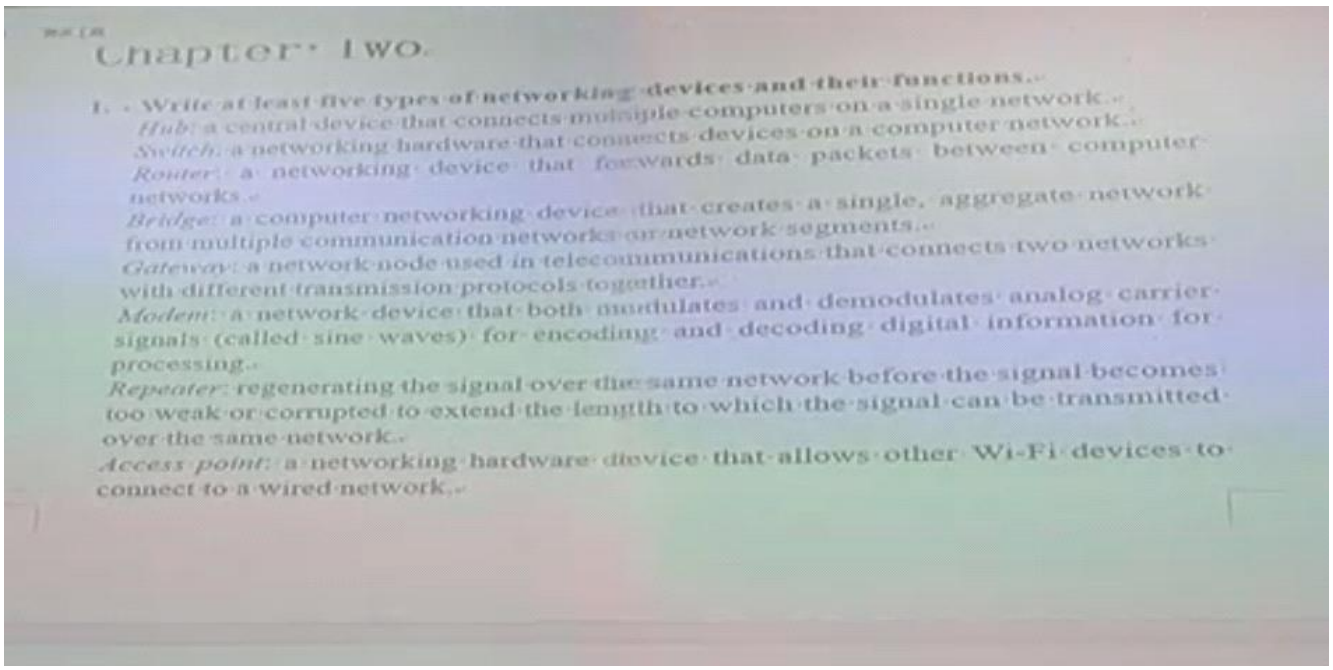
另一份重点在moodle上，内容相对会多一些，【跳过】，去年的题目是老师选的，伍伦贡有题库，会选择的，部分模拟题如下



Chapter One

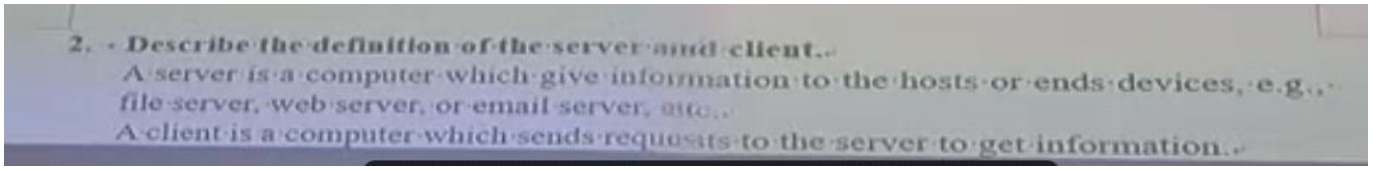
1. Describe the importance of network analysis.
Network analysis provides a comprehensive understanding of network and system complexity and a record of information that was used to make decisions, which ensures that an audit trail exists so that architecture and design are defensible.
2. What is the difference between architecture and design?
Network architecture focuses on finding the best network. Its results include a reference architecture and descriptions of interactions, trade-offs, dependencies, and constraints.
Network design focuses on the minimization of cost and maximization of performance, such as the evaluation and choice of equipment or choice of business partners.
3. What is the difference between hierarchy and diversity/interconnectivity?
Hierarchy is the degree of concentration of networks or traffic flows at interconnection points within the network and the number of tiers of interconnection points within the network.
Diversity is the interconnection within the network.
4. What do hierarchy and diversity/interconnectivity achieve respectively?
Hierarchy helps in determining the size of network, addressing and routing configurations, scaling of technologies, performance and service levels.
Diversity provides interconnections at different levels of the design, which can enhance network performance but also provides redundancy.

Chapter Two



Chapter Two

1. Write at least five types of networking devices and their functions.
Hub: a central device that connects multiple computers on a single network.
Switch: a networking hardware that connects devices on a computer network.
Router: a networking device that forwards data packets between computer networks.
Bridge: a computer networking device that creates a single, aggregate network from multiple communication networks or network segments.
Gateway: a network node used in telecommunications that connects two networks with different transmission protocols together.
Modem: a network device that both modulates and demodulates analog carrier signals (called sine waves) for encoding and decoding digital information for processing.
Repeater: regenerating the signal over the same network before the signal becomes too weak or corrupted to extend the length to which the signal can be transmitted over the same network.
Access point: a networking hardware device that allows other Wi-Fi devices to connect to a wired network.



2. Describe the definition of the server and client.
A server is a computer which give information to the hosts or ends devices, e.g., file server, web server, or email server, etc.
A client is a computer which sends requests to the server to get information.

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3. **Write the features of three types of computer network models and draw the schematic diagram of each model.**

A centralized network model includes one central computer called master and dependent computers called surrogates.