《计算机网络》考核大纲

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目录

- 课程编号：A05055

- 课程名称：计算机网络

- 任课教师：王晓林

- 适应专业：计算机本科专业

- 授课学时：32/16

- 考试方式：闭卷笔试

- 命题规则：按《西南林学院考试命题规则》(试行)(1996 年 10 月修订) 执行

- 考试时间：120 分钟

- 推荐教材：

  - *Computer Networks*, Xie Xiren, Electronics Engineering Press.
  - *Computer Networks*, Andrew S.Tanenbaum, Tsinghua Unversity Press.
  - *Computer Networks Lab Tutorials*, Xie Qian, Electronics Engineering Press.
  - *Computer Network Tutorials*, Du Yu, People's Post and Telecommunication Press, 1st edition Jan 2002.
  - *Computer Network Practical Tutorials*, Wang Li, Zhang Yuxiang, Yang Lianghuai, Tsinghua University Press, 1st edition Dec 1999.

- 课程性质及教学目的：本课程为计算机专业本科专业基础课。要求学生全面了解 TCP/IP 网络的工作原理。

  各章节考核目标如下：

1 TCP/IP Introction

1.1 考核知识点

- What's TCP/IP?

- What's a protocol stack?

- Relation between adjacent layers?

- Relation between peer layers?

- What's RFC?

1.2 考核要求

Know the above key points.

2 Ethernet and ARP

2.1 考核知识点

- Frame format

- Address format

- Broadcast address

- CSMA/CD

- How ARP works?

2.2 考核要求

Know the above key points.

3 IP routing

3.1 考核知识点

- IP address (format, classification, Netmask)
- Route table
- How routing works
- Subnetting
- IPv6 address format

3.2 考核要求

Know the above key points.

4 TCP, UDP

4.1 考核知识点

- Sockets
- 3-way handshake
- TCP header
- tcpdump
- Socket programming

4.2 考核要求

Know the above key points.

5 Application layer protocols

5.1 考核知识点

- HTTP
- FTP
- SMPT, POP3, IMAP
- DNS

5.2 考核要求

Know the above key points.