Subject Summary

If you missed some lectures, then don't miss this one!

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A computing department

Main Topics in this Subject

- Perl

- SNMP

- Network Troubleshooting

- Network Design
    - DHCP and DNS systems
    - LDAP directories and querying them

- Routing, Route Summarisation

Perl

- We covered the basics of the language

- Refer to the Perl Summary that I wrote

- You did two assignments
  - Revise your work in both of them

- I will provide a copy of the booklet *Perl Reference Quide* in the exam (no need to bring your own copy)
  - Please return the booklet in the exam
  - Please do not write in it or mark it
  - We want to use them again next year

- There is one question in the exam on this topic

SNMP

- There are *two* sets of notes on this topic;
  - one (short set) from Albert on the ISO network management model,
  - one (long set) on the practicalities of SNMP
- You have configured an SNMP agent in the laboratory
- In the lectures you also studied SNMP version 3
  - If I had more time, I would have made some laboratory exercises on this topic
- You had a test on this topic. I suggest that you revise this.
- There is one question on this topic in the exam

Network Troubleshooting — 1

- This is a *new topic*; there are *no previouos exam questions* on this topic.

- I focussed on the use of Ethereal and `tcpdump` for collecting information about network problems

  - However, Ethereal screen dumps don't fit well into an exam paper

  - I wrote additional notes on using `tcpdump` with DHCP

  - So you may use your judgement as to which Ethernet packet sniffing tool I refer to in the exam.

Network Troubleshooting — 2

- We also examined many uses of such important and commonly available basic tools as `traceroute` (or `tracert`) and `ping`

  - Do *not* waste time memorising any lengthy formulas; if they are required, they will appear in an appendix to the exam.

- We covered many topics in this area, including troubleshooting a switched network

- Altogether, there is one question *directly* on this area, and half a question that is *at least partly* on this area

DHCP and DNS Management Systems

- We covered the basics of DHCP operation
  - including normal operation, and
  - problems that can occur in DHCP operation
- We also studied two schemes for automating DHCP and DNS management
  - One scheme introduced at this Institute, in the Computer Centre and our Department,
  - One fully automated registration scheme involving a web registration application to which new users are automatically directed
- There is half a question *directly* on these topics, and another half question that *includes* these topics

LDAP directories and querying them — 1

- We covered a number of aspects of `LDAP` directories, and
  - I provided a laboratory exercise in setting up network accounts on a directory server,
  - But due to insufficient laboratory time, we did not work through this in the classroom
  - That will not be in the exam
- However, we covered a few topics in authentication and authorisation
  - both in the lectures and in the laboratory

LDAP directories and querying them — 2

- I have already told you that:
  - an appendix to the exam paper from RFC 2254 describes the grammar for LDAP
  - Another appendix to the exam paper from RFC 2255 describes the grammar for LDAP URLs.
- There is one question on this topic in the exam.

Routing, Route Summarisation

- Due to the SARS epidemic, my planned coverage of this area has been reduced, mainly to covering:
    - route summarisation and
    - address block allocation and design.

- In particular, we have *not* covered the same areas of switching as in the previous year

- I suggest that you be guided by the tutorial exercises we do in this area.

- There is half a question on this topic in the exam.

Format of the Exam (2002–2003)

- There are *five* questions

- There are *no options*—do all five questions

- That's good—no need to waste time deciding which one to leave out!

Advice for the Exam

- *Budget your time* wisely in the exam:
  - Spend a few minutes to *plan* your time
  - Divide remaining time by five
  - Do *not* spend more than this time on any one question until you have answered five questions fully
- Show your working
  - A wrong answer with no working gets *zero* marks
  - A wrong answer with some working that is on the right track gets *some* marks

Summary of Topics in Exam

Topic	Number of Questions: directly, partly
Perl	1
SNMP	1
Network Troubleshooting	1, $^1/_2$
Network Design:	
DHCP and DNS systems	$^1/_2$, $^1/_2$
LDAP directories and querying them	1
Routing, Route Summarisation	$^1/_2$

Watch the Subject Web Site

- I will begin writing *solutions* to past exam papers, the test, laboratory exercises and workshops, and *post them on our subject web site*

- Watch the web site for announcements:

- I will write and post *solutions* to problems as soon as I can.

- I will make a *new icon* to highlight changes on the site,
  - including solutions to problems as I write them.