**Main Topics in this Subject**

- Perl
- SNMP
- Network Troubleshooting
- Network Design
  - DHCP and DNS systems
  - LDAP directories and querying them
- Routing, Route Summarisation

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**Perl**

- We covered the basics of the language
- Refer to the Perl Summary that I wrote
- You did some laboratory exercises on Perl
  - Revise your work carefully in all of them
  - Detailed solutions are on the website
- Make sure you know how to write a subroutine and how to call it, and how to pass parameters
- I will provide a copy of the booklet *Perl Reference Guide* 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
- There is one question in the exam on this topic

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**SNMP**

- There are two sets of notes on this topic;
  - one (short set) from Albert on the ISO network management model
    - don’t just memorise the names; sorry, you need to understand what you study!
  - one (long set) on the practicalities of SNMP; read them carefully
- You put some effort and time into Cricket in the lab.
  - Make sure you know what you were doing, and what Cricket can do.
- Make sure that you understand all the details of the SNMP operations (requests); read the labs again.
- There is one question on this topic in the exam
Network Troubleshooting — 1

- This is a new topic; there are no previous 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.
  - Some of these may be included as an appendix in the exam; understand, don’t memorise.
- So you may use your judgement as to which Ethernet packet sniffing tool I refer to in the exam.

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.

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.

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.


- 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

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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.