



## SNMP Study Guide

This document is intended to help in your preparation for the test on SNMP which will be held in the normal lecture theatre B115 on Tuesday, 20 January 2004, **10.30 am**, *not* 9.30, sorry!

1. Know what SNMP is useful for, what it can do, what it cannot, its strengths and limitations; be aware of alternatives.
2. Know the basic SNMP operations, basic data types of SNMP
3. Understand how the `get-next` and `get-bulk` request operations know which node is next.
4. Ensure you know what an *instance number* is, and how it relates to SNMP scalars and tables.
5. Understand how a network management station can determine network traffic in bits/second from the bytes obtained from the SNMP variables `IF-MIB::ifInOctets`, `IF-MIB::ifOutOctets`:  $\text{traffic} = 8 \frac{N_{n+1} - N_n}{t_{n+1} - t_n}$  bits/second, where  $N_i$  is measured in bytes,  $t_i$  is measured in seconds.
6. Understand how VACM works, have a basic understanding of USM. Be able to use the diagram in the slide entitled “Net-SNMP VACM” in the SNMPv3 lecture notes to determine the Net-SNMP syntax for VACM.
7. Know what a Perl reference is, and be able to modify a simple Perl program that uses `Net::SNMP`. The laboratory exercise <http://nicku.org/snm/lab/perl-snm-tut/perl-snm-tut.pdf> is a reasonable guide to this.
8. Review the laboratory exercises: <http://nicku.org/snm/lab/snmp-intro/snmp-intro.pdf>, <http://nicku.org/snm/lab/snmp-operations/snmp-operations.pdf>, <http://nicku.org/snm/lab/snmp-v3-tut/snmp-v3-tut-solns.pdf> also.