Study for ELEC S212 Exam

Dear ELEC S212 students,

How about your progress in this course? We are now approaching the end of the course, and the final examination is scheduled on **Friday, 24 May 2019**.

In order to encourage you to make a well planning for revision of the course materials, and to make an early preparation of the final examination, the specimen examination paper is now released to you. **Please note that the specimen examination paper only reflects the scope, format, and style of the examination**.

The ELEC S212 examination will cover all the main areas in the course. Each question has its own coverage on a particular main topic of the course. Please go through the following details to get some ideas about the coming examination: the time allowed, sectioning, and scope of the examination.

The total time allowed is 3 hours (180 minutes). In Part A, you need to answer **5 compulsory questions**. You are suggested to spend about 90 minutes (about 18 minutes for each question) in this part. In Part B, there are 4 long questions. Choose 3 out of 4 in this part. You are suggested to spend about 25-30 minutes in each of questions in Part B.

PART A: Questions 1 to 5 (55%)

Answer all questions in Part A: Questions 1 to 5. Each question is worth 7-12 marks. Each question is about some basic concepts and knowledge mentioned in each study unit. The coverage of these questions is arranged as follows.

- One question covers Units 1 and 2.
- One question covers Units 3 and 4.
- One question covers Unit 5 and 6.
- One question covers Unit 7 and 8.
- One question covers Unit 9 and 10.

PART B: Questions 6 to 9 (45%)

Answer no more than **three questions** from Part B: Questions 6 to 9. Each question is worth 15 marks.

Question 6 will cover Unit 3: the essential of TCP/IP. Main topics include:

- IPv4 addressing
- IP sub-netting
- IP routing
- TCP and UDP

Question 7 will cover Units 5, 6 and 7. Main topics include:

- Programming in C
- Write, compile and execute C programs in Unix
- Socket programming in C
- TCP client programming
- TCP server programming
- Hypertext Transport Protocol (HTTP)
- Programming for the Web, Server-side scripting and client-side scripting, CGI, SSI, etc.

Question 8 will cover Units 8 and 9. Main topics include:

- Security goals and security management
- Symmetric and asymmetric encryption 比較
- Security in network design: network segmentation, firewalls, proxy servers, IDS, VPN, IPSec
- Security protocols: Secure Socket Layer (SSL), IPSec, Secure Shell (SSH), etc.
- Security in wireless networks

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Question 9 will cover Unit 10 and Units 1, 2 and 4. The question involves some open-ended and/or practical questions about network design and other networking concepts in general.

While rote memory is not the focus of the examination, you still need to remember the things you have learned. It is hard to remember something that you don't understand. To enhance your understanding and memory, I suggest you to start preparing at least one month prior to the examination. According to a book about learning, studying 2 hours every day of the week leads to better memorization than cramming all 14 hours of study time on one day.

I wish you a great success in the final examination.

Steven Choy (ELEC S212 CC)

Monitor (數據分析 server prtg)
- Server nic card, error rate
- traffic (peak hours)
- system events