

University of Canterbury
Department of Computer Science and Software Engineering

Summer Lab Tests 2004

Prescription Number(s): **Cosc121**

Paper Title: **Introduction to Computer Science 1A**

Time Allowed: **TWO hours**

Number of Pages: **5**

Surname:

Given names:

Student ID:

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*Do not write in this
space*

Q 1

Q 2

Q 3

Q 4

Total

- Answer *all* questions.
- Check carefully the number of marks allocated to each question. This suggests the degree of detail required in each answer, and the amount of time you should spend on the question.
- Two A4 pages (two sides of an A4 sheet of paper) of *hand-written* notes may be used.
- You *are* permitted to use calculators.
- Use the separate *Answer Booklet* for answering *all* questions.
- No form of collaboration is permitted.
- You will not be permitted to enter the examination room later than forty-five minutes after the start of the examination; you will not be permitted to leave the room during the first hour or final fifteen minutes of the examination. The supervisor will announce when you may begin working on the examination.
- You may take pens, pencils and, where appropriate, drawing instruments into the examination. You must not take anything else (e.g. books, notes, tables, calculators, paper) into the room unless the examiner has specifically authorised the material for that particular examination. If the examiner has authorised the use of calculators, these must be self-powered, noiseless and hand held.
- Cheating in examinations is considered an extremely serious offence which may lead to expulsion from the university. If you have accidentally taken revision notes or other unauthorised material into the examination room, surrender them immediately to the supervisor. Do not look at other candidates' answers, and do not talk or communicate in any way with other candidates since this may lead to suspicion of copying.
- Immediately after taking your seat, fill in the attendance slip and enter your name and the course code and title in the spaces on the front of your answer book.
- Do not start reading the examination questions or writing answers until the supervisor announces that you may begin.
- Answer in English and write in ink unless the question paper gives other instructions.
- Write clearly; illegible answers will not be marked.
- Do not tear any pages out of the answer book. Rough working can be done in the answer book or you may request extra sheets from the supervisor. Clearly cross out rough working before handing in your book. Tie all extra sheets including rough working into the answer book at the end of the examination.
- Once the supervisor announces the end of the examination do not add anything more to your answers.
- You must hand in your answer book to the supervisor before you leave the room.
- Do not attempt to discuss any aspect of the examination with any of the examiners for the course before the results are published. If you have any queries or complaints, write to the Registrar.

Note: If you consider that your performance in the examination has been seriously affected by illness, injury, bereavement or other critical circumstances, you may be

eligible for aegrotat consideration. Application forms and information are available from the Registry or the Student Health and Counselling Service. In the case of illness or injury, if you have not already seen a doctor you should arrange to do so without delay. Aegrotat applications must be submitted within seven days.

- This item of assessment is worth 25 marks.

1. **[10 marks for whole question]** How much wood would a woodchuck chuck, if a woodchuck could chuck wood?

2. [5 marks for whole question] $P = NP$. Comment.

3. **[5 marks for whole question]** Plot the relationship between the number of woodchucks available to chuck wood, and the amount of wood that is chucked.

4. **[5 marks for whole question]** Write a function to swap the values of two integers that are pointed to by the arguments to the function.

void swap(<hr/>
{ <hr/>
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}

End of Paper