UNIVERSITY OF TORONTO  
Faculty of Arts and Science  
APRIL 2017 EXAMINATIONS  
CSC 236 H1S  
Instructor(s): Smith  
Duration—3 hours

Examination Aids: One double-sided, handwritten 8.5" x 11" sheet of paper.

You must earn at least 22.4 out of 56 marks (40%) on this final examination in order to pass the course. Otherwise, your final course grade will be no higher than 47%.

Student Number: ____________
Last (Family) Name(s): _________________________________
First (Given) Name(s): _________________________________

Do not turn this page until you have received the signal to start.  
In the meantime, please read the instructions below carefully.

This Final Examination paper consists of 8 questions on 14 pages (including this one), printed on both sides of the paper. When you receive the signal to start, please make sure that your copy of the paper is complete and fill in your name and student number above.

• Answer each question directly on the exam paper, in the space provided, and use the reverse side of the previous page for rough work. If you need more space for one of your solutions, use the reverse side of the previous page and indicate clearly the part of your work that should be marked.

• In your answers, you may use without proof any result covered in lectures, tutorials, homework, tests, or the textbook, as long as you give a clear statement of the result(s) you are using. You must justify all other facts required for your solutions.

• Write up your solutions carefully! In particular, use notation and terminology correctly and explain what you are trying to do—part marks will be given for showing that you know the general structure of an answer, even if your solution is incomplete.

• If you use any space for rough work, indicate clearly what you want marked.

• Do not remove pages or take the exam apart.

Marking Guide

# 1: ______/ 5
# 2: ______/ 6
# 3: ______/ 8
# 4: ______/ 8
# 5: ______/ 9
# 6: ______/ 5
# 7: ______/ 8
# 8: ______/ 7
TOTAL: ______/56

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Good Luck!