

COT 3541
Section U02
Fall 2015

PRACTICE MIDTERM EXAM

INSTRUCTIONS

1. This test is closed book, closed notebook.
2. You cannot use computers, calculators, or cellphones.
3. If you need to use the bathroom, do it before the test.
4. There are 5 questions on the test, for a total of 70 points.
5. For the multiple choice questions, there is no penalty for wrong guessing. For proofs, every word counts.
6. Circle the answers to questions 1 and 4 on the exam paper. Write the answers to the other questions on the blank sheets of paper.
7. If you do not understand the meaning of a question ask me during the test.
8. You have 1 hour and 15 minutes to work on the test.
9. Write your name below.

NAME: - - - - -

QUESTIONS

Question 1. (15 points)

This is a multiple choice problem with 15 multiple choice questions.

Question 2. (15 points)

This is a structural induction problem.

Question 3. (15 points)

Apply the algorithm from the book to compute a CNF for a formula.

Question 4. (10 points)

A multiple choice problem with 10 questions.

Question 5. (15 points)

Derive the box from a set of clauses.

You can use these problems from the Past Exams to prepare for the exam.

I. Problems for the multiple choice questions

1. Past Exam 1, Question 1
2. Past Exam 2, Question 1
3. Past Exam 3, Question 1
4. Past Exam 3, Question 4
5. Past Exam 4, Question 1
6. Past Exam 4, Question 4
7. Past Exam 5, Question 1
8. Past Exam 6, Question 1
9. Past Exam 8, Question 1
10. Past Exam 10, Question 1
11. Past Exam 11, Question 1
12. Past Exam 13, Question 1
13. Past Exam 16, Question 1
14. Past Exam 16, Question 4
15. Past Exam 17, Question 1

II. Problems for the induction proof::

1. Past Exam 1, Question 2
2. Past Exam 2, Question 2
3. Past Exam 8, Question 2
4. Past Exam 10, Question 2
5. Past Exam 11, Question 3
6. Past Exam 13, Question 3
7. Past Exam 16, Question 2
8. Past Exam 17, Question 4
9. Past Exam 21, Question 2

III. Computing a CNF

1. Past Exam 3, Question 5
2. Past Exam 4, Question 5
3. Past Exam 11, Question 5
4. Past Exam 13, Question 4
5. Past Exam 17, Question 5

IV. Resolution Trees

1. Past Exam 11, Question 2
2. Past Exam 13, Question 2
3. Past Exam 13, Question 2
4. Past Exam 20, Question 4
5. Past Exam 21, Question 4
6. Past Exam 24, Question 4
7. Past Exam 25, Question 4