

**CS 350 Theory of Computation**

**Assignment 5 (8 marks)**

**Question 1 (1 marks)**

Problem 7.9 (page 295).

**Question 2 (1 marks)**

Show that  $ALL_{DFA}$  is in  $P$ .

**Question 3 (2 marks)**

Let  $DOUBLE-SAT = \{ \langle \phi \rangle \mid \phi \text{ has at least two satisfying assignments} \}$ . Show that  $DOUBLE-SAT$  is NP-complete.

**Question 4 (2 marks)**

Problem 7.24 (page 296).

**Question 5 (2 marks)**

Problem 7.26 (page 297).

**Date Due:** before the end of class on **Thursday, April 23, 2009**. No late assignment is accepted.