Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student ID# (last 4 digits) \_\_\_\_\_\_

Instructions: This is not a graded event but a study aid. Work all problems to build experience and speed.

For problems 1 through 4 find the truth value for the following expressions if A is False, B is true, C is False and D is true:

Note, the apostrophe ‘ denotes negation

1. Given: [(A ˅ B) ˄ D] ˅ C
2. Given: [(A ˅ B)’ ˄ D] ˅ C
3. Given: D’ ˅ (A’ ˄ D) ˅ C’
4. Given: A → B ˄ D

For each of the following expressions create the truth table

1. A’ ˄ B
2. (C ˄ D ˅ A)’

For problems 7 through 9 show that the first expression is equivalent to the 2nd expression using truth tables.

1. (C ˄ D ˅ A)’ ↔ C’ ˅ D’ ˄ A’
2. A ˅ (A’ ˄ B) ↔ A ˅ B
3. (A ˅ B) ˄ (A ˅ C) ↔ A ˅ (B ˄ C)

Given the following information translate the expression below into English:

A = The villain is French

B = The hero is American

C = The heroine is British

D = The movie is Good

1. (C → D) ˄ (A → B’) (this is problem 18.g in textbook)