

NAME:

SID:

Sample Exam

I (30 pts) _____

II (20 pts) _____

III (30 pts) _____

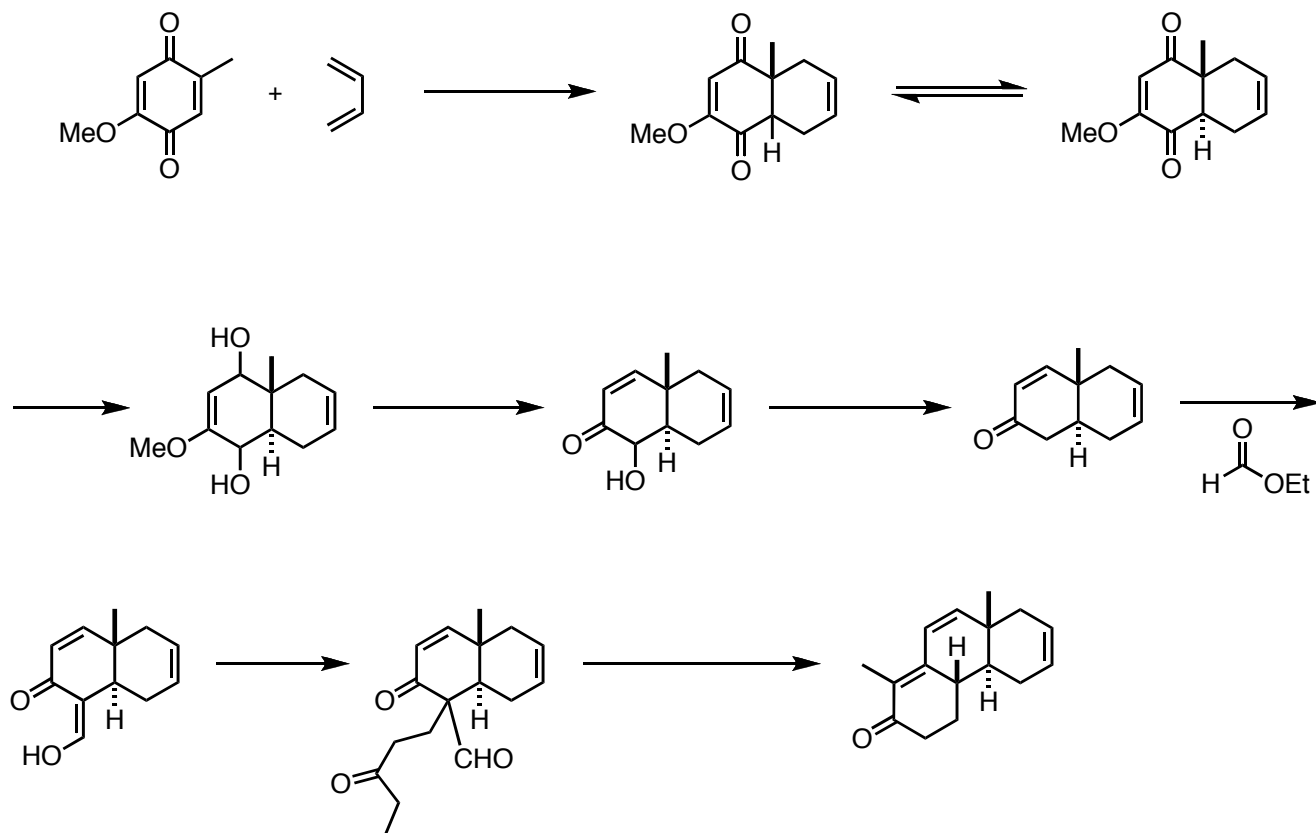
IV (20 pts) _____

TOTAL (100 pts) _____

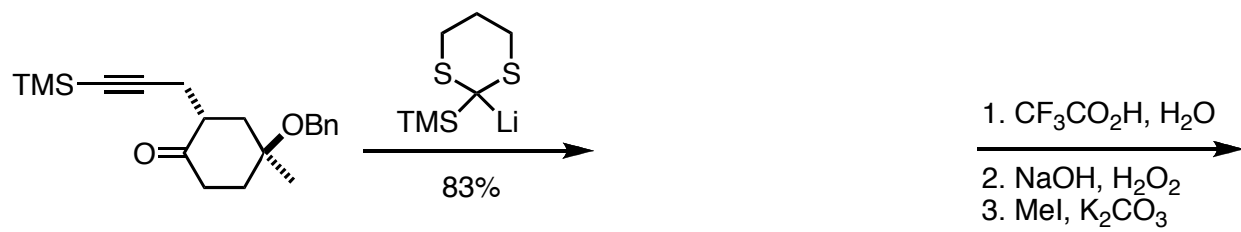
This Exam has 6 pages.

Good luck!

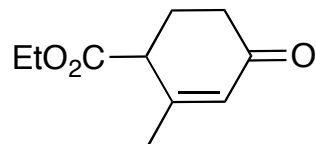
Problem I. (30 pts) Propose conditions (reagents) for the following conversions:



Problem II. (30 pts) Propose **intermediate** and **product** in the following synthetic sequence.



Problem III. (30 pts) Starting with either diethyl malonate or ethyl acetoacetate, how would you make this compound? Suggest a synthesis, including actual reagents, but don't show mechanisms.



Problem IV. (20 pts) Give short definitions (structures) or examples for the following expressions or reaction types:

a) a Zimmerman-Traxler transition state

b) an Evans aldol reaction

c) a (Z)-selective Horner-Wadsworth-Emmons ylide

d) a pinacol rearrangement

e) a Heck coupling

f) a Sonogashira reaction