**TAKE HOME PORTION OF ORGANIC II EXAM 3/FINAL COMBO**

**Alfred State College Due by 2 PM Tuesday 9 May 85 pts**

**Ground rules**

1. You may work together or separately. It is suggested that you break into teams of two or three and tackle just one of the compounds, then share results. Groups can turn in a collective exam as long as the group is satisfied that all have contributed significantly. Do not let anyone just `go along for the ride’.

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b) You may not consult Doc or any other chemist for help. You are on your own.

**c) ONLY the organic compounds listed below are allowed. If necessary, you will need to find routes to common organic materials like methanol, acetone, toluene etc. from just what is given. For convenience, if you have provided a route to such compounds and they are common to several syntheses, you can `save’ them to a common reactant ‘bank’ and `withdraw’ from the ‘bank’ rather than repetitively re-making them for each synthesis.**

1) starting ***from just*** ethanol prepare compound A



5 pts

**A**



2) starting ***from just*** benzene and ethanol, suggest a route to compound **B** **B**

10 pts



3) starting ***from just*** ethanol and benzene find a route to compound **C** **C**

10 pts



4) starting ***from just*** ethanol and benzene find a route to compound **D** **D**

15 pts



5) Starting ***from just*** ethanol find a route to compound **E**  **E**

20 pts (a Fong original he’s given the common name shown, nyuk,nyuk)

Dihydroxy Moeyne

6) Starting from just methanol synthesize **all** materials necessary to build compound **F**

25 pts (hint-Doc found the protecting group acetal chemistry (look it up) helpful to



protect keto intermediate prior to conversion to phenol…though it’s not the only approach)

**F**

**All requisite reactions are covered either in chapters covered in Fall and Spring and/or have been run in lab.**