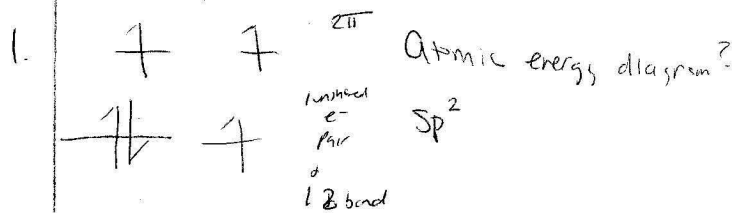
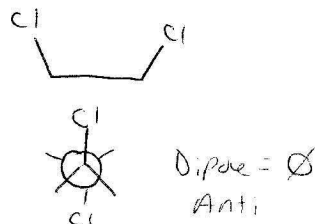


test 1

CHM 201 Colonna Test 1 Fall 2007



2. largest Dipole moment of 1,2 dichloroethane
 Cl-Cl eclipsed

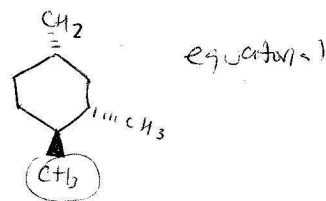
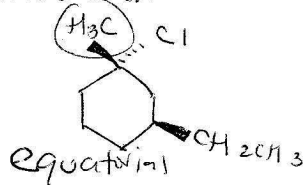
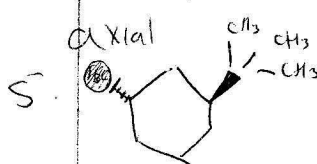


3. which orbital is N unshared e^- pair?
 sp^2

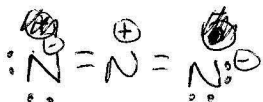


4. ~~not~~ not polar?

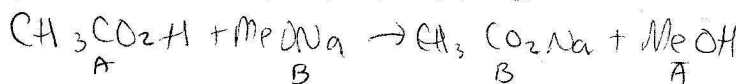
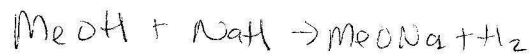
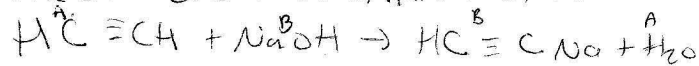
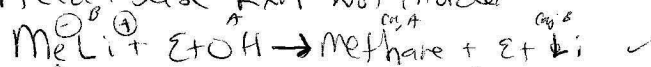
trans-1,2 dichloroethane



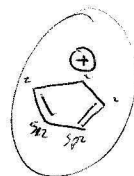
6. N_3^-

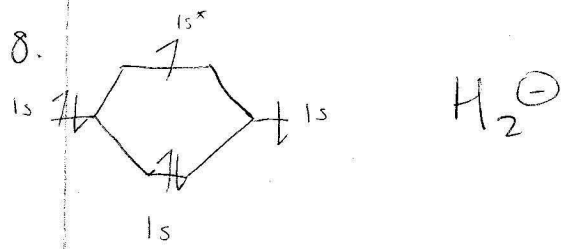


7. Acid/Base rxn not in order



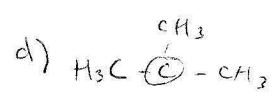
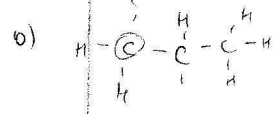
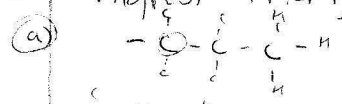
which one has sp^2 hybridization?



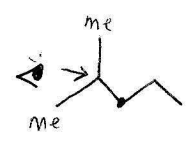
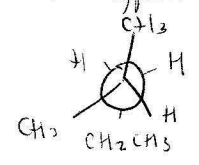


9. higher boiling pt = more H bonds

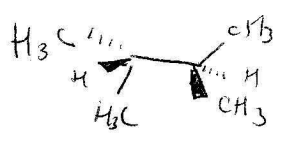
10. Highest Priority under (E,Z) system?



11. 2-methylpentane



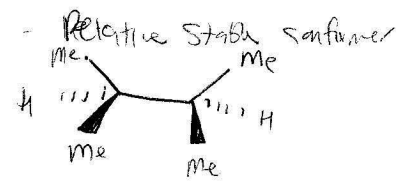
12. 2,3 dimethylbutane - lowest energy

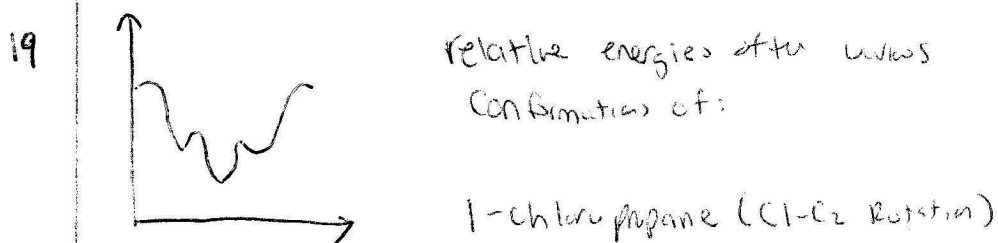
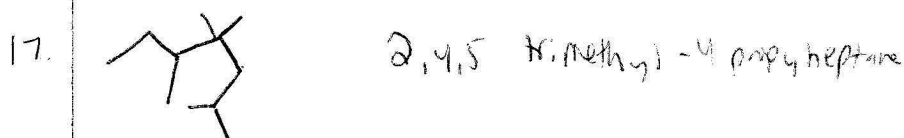
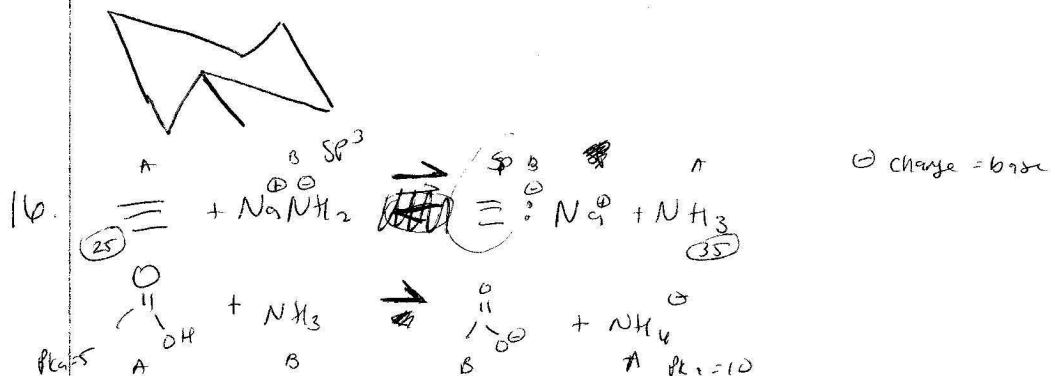


13. degree of unsaturation?

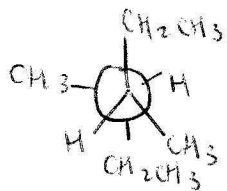


14. 2,3 dimethylbutane

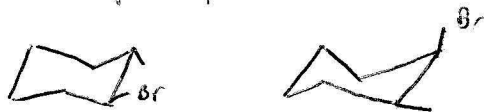




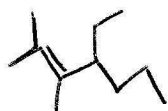
20. Most stable of 3,4-dimethylhexane



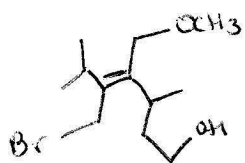
21. Not ~~represent~~ represent conformers



22. Structure for 4-ethyl-2,3-dimethyl-2-heptene



23. geometry of the double bond (E or Z)

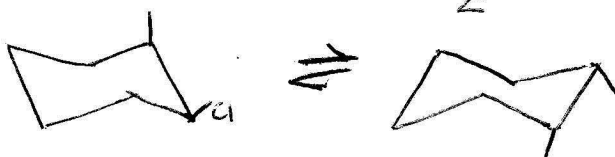


E



Z

24.



Cl

Ratio of the 2 conformers at room temp

10:90

axial 2x Me/H 1.5 di = 2 x 3.0

1 x Me/Cl gauche = ?

$$\Delta E = (2 + ?) - (7.2 + ?) = -5.2$$

$$K_{eq} = 8.33 = \frac{[axial]}{[equatorial]}$$

2 x Cl/H 1.2 = 2 x 1

1 x Cl/Me gauche = ?