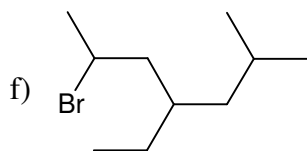
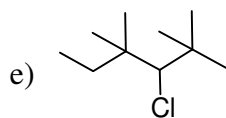
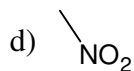
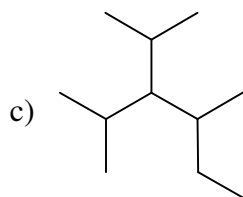
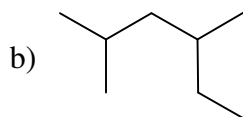
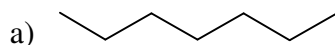


Name _____

CHEMISTRY 230 SEMESTER 01-2015

Print out this homework on letter sized paper. Answer the questions carefully (not on this sheet) and then submit your answers on Monday morning at the start of class. Note that if there is clear evidence of copying, the whole exercise may attract a zero mark, and the matter may be reported to the authorities.

- 1) For the following *line* (or *skeletal*) formulae, give (i) Kekulé structures showing lone pairs and formal charges if appropriate, (ii) molecular formulae, and (iii) systematic names. (18)



- 2) For structure 1b above, label each atom as 1°, 2°, 3°, or 4° as appropriate. What is the hybridisation state of the atoms? (9)
- 3) Draw (i) Kekulé and (ii) skeletal structures corresponding to each of the following names. (12)
- Methylbutane
 - Dimethylpropane
 - 3-ethylpentane
 - 3-(1,1-dichloroethyl)-hexane
 - 1,1,1-trichloro-2,2-di-iodothane
 - 4-*t*-butylheptane
- 4) Draw line-structures (skeletal structures) for four isomers of 1,1-dichlorobutane. Give each one a systematic name. (Do not consider *optical isomers*, since we have not met them in class yet.) (4)