

IB chemistry

Organic chemistry exam

Name: _____

1. Draw these compounds:

a) 2,2,3-trimethyloctane [1]

b) 3,3-dibromo-2-chloropentane [1]

c) Hexanoic acid [1]

d) 4,4-dimethyl-2-heptanol [2]

e) propylethyl ether [1]

f) 4,4-diethyl-oct-2-ene [2]

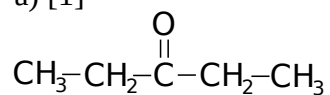
g) methylpropylamine [2]

h) 2-hexanone [1]

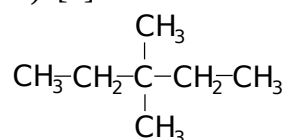
i) propanal [1]

2. Name the following compounds

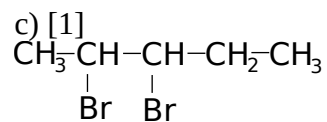
a) [1]



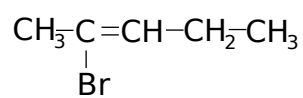
b) [1]



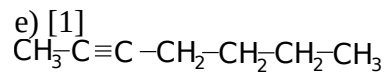
c) [1]



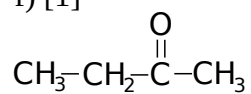
d) [2]

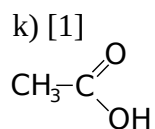
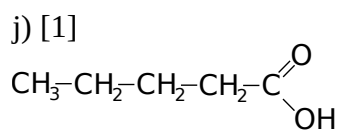
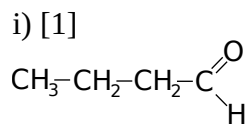
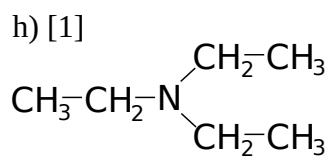
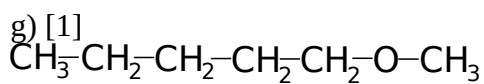


e) [1]

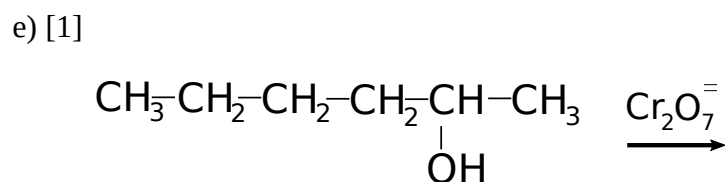
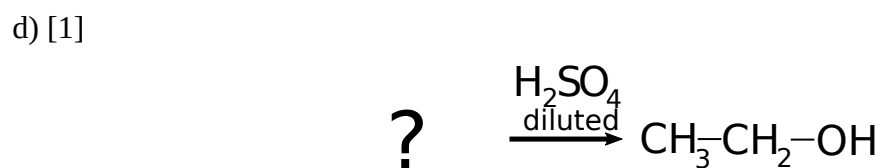
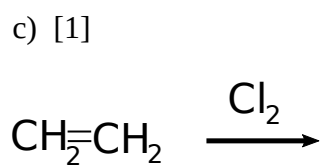
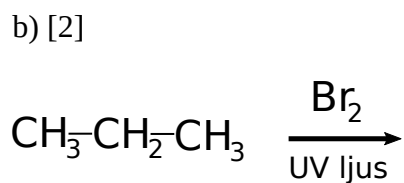
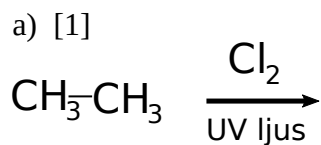


f) [1]

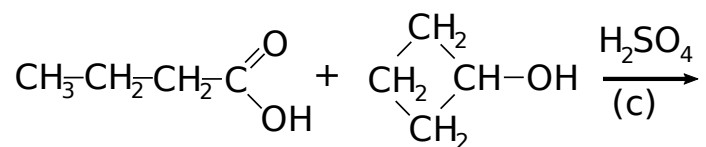




3. Predict the product (or products) or draw the reactants for the following reactions



f) [1]



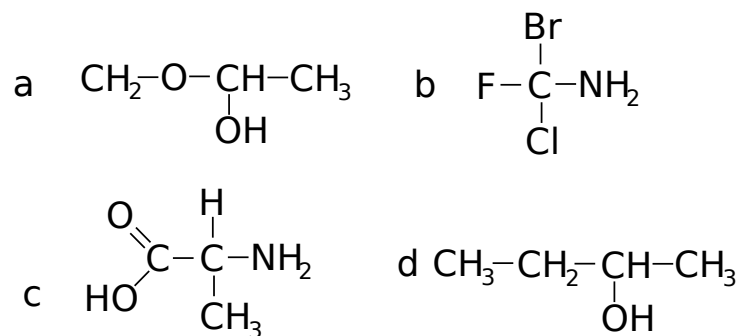
4. Explain what a nucleophile is and give one example.[3]

5. a) What is a monomer? give one example. [2]

b) Write the formula of any polymer that is not polyethene. [2]

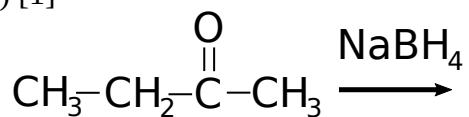
Bonus question: The polymerization of polyethene or polypropylene IS NOT considered a "condensation" reaction, but the formation of a protein or the polymerization of polyester is. Why is this so? [2]

6) Which of these compounds have optical isomers (R and S) ? Explain how you can tell.(HL) [3]

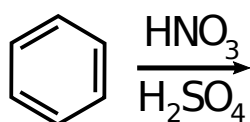


7) Predict the product or draw the reactants in the following reactions. [HL]

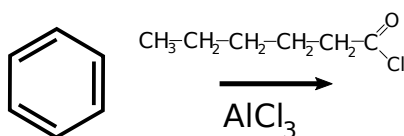
a) [1]



b) [1]



Bonus: c) [1]



8) Find a way to prepare ethyl ethanoate starting from ethane and using any reagent learned in the course.[4]

