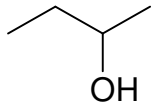
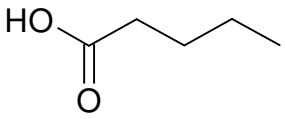
Name:_____

Organic Chemistry Test – SCH 4C

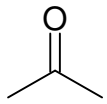
1. For each of the following structures write the name of the functional group (i.e. the family of organic compounds to which it belongs), the name of the compound where requested, comment on the level of polarity for the compound and finally state the type of intermolecular force present between molecules (choose from van der Waal, dipole or hydrogen bond). Use the information on the bottom of the next page to assist in naming.



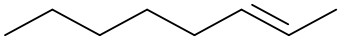
functional group
name
polarity
intermolecular force



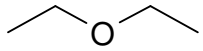
functional group
name
polarity
intermolecular force



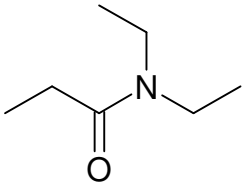
functional group
name
polarity
intermolecular force



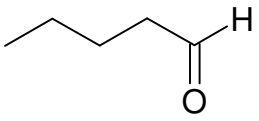
functional group
name
polarity
intermolecular force



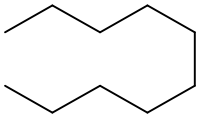
functional group
polarity
intermolecular force



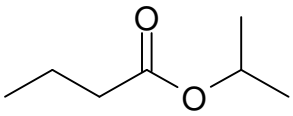
functional group
polarity
intermolecular force



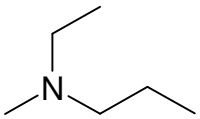
functional group
name
polarity
intermolecular force



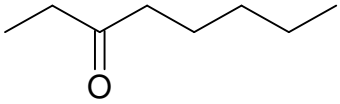
functional group
name
polarity
intermolecular force



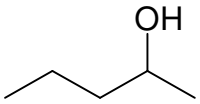
functional group
polarity
intermolecular force



functional group
polarity
intermolecular force



functional group
name
polarity
intermolecular force



functional group
name
polarity
intermolecular force

Prefix – number of carbons relationship

meth – 1
eth – 2
prop – 3
but – 4
pent – 5
hex – 6
hept – 7
oct – 8
non – 9
dec – 10

Suffix – functional group relationship

ane – alkane
ene – alkene
yne – alkyne
anol – alcohol
anal – aldehyde
anone – ketone
anoic acid – carboxylic acid

2. For each of the following pairs of compounds,
   - draw a structure using either full structures, abbreviated structures (i.e. H not drawn in) or simplified stick structures
   - state the polarity of each compound
   - state the name of the primary intermolcular force of attraction
   - circle the one with the highest boiling point
   - give and explanation for the reasoning behind your choice of highest boiling point.

heptane	butane
polarity	polarity
intermolecular force	intermolecular force
explanation for choice of highest boiling point	

pentanoic acid	pentane
polarity	polarity
intermolecular force	intermolecular force
explanation for choice of highest boiling point	

continued on next page

2-propanone	3-octanone
polarity	polarity
intermolecular force	intermolecular force
explanation for choice of highest boiling point	

Bonus Question: Give the chemical formula for: