**CARBONYL COMPOUNDS WORKSHEET**

1. Draw and name the different isomers of C5H10O that are aldehydes or ketones. I can find 8 – 3 ketone and 5 aldehyde.

2. Write a synthesis (starting organic material plus reagents) for the synthesis of the following aldehydes/ketones. Give the structure and proper name of the starting materials.

a) diethyl ketone

b) 3-methylbutanal

c) 2,2-dimethylpropanal

d) methyl propyl ketone

e) benzaldehyde

f) acteophenone

3. Draw (and name if you can) the product when (i) butanal and (ii) acetone are reacted with:

a) NaBH4

b) K2Cr2O7/H2SO4

c) NaCN + HCl

d) KN3 + HCl [assume N3- behaves like CN-]

4. Draw the mechanism for reaction d with acetone.

5. Order in terms of increasing reactivity towards nucleophilic addition and explain why.

Ethyl methyl ketone, ethanal, acetone, hexachloroacetone