Extra Practice Questions for Organic Compound Names / formulas

1. Give the names for the following chemical compounds:

a).
$$H_3C$$
— CH_2 — CH — CH_2 — CH_3 **3-pentanol**

c).
$$H_3C$$
— CH = C
 CH_3
 CH_3
 CH_3
 CH_3

c).
$$H_3C-CH=C \xrightarrow{CH_3} 2$$
-methyl-2-butene

d). $H_3C-CH-CH-CH_2-CH_3$
 $H_3C-CH-CH-CH_2-CH_3$
 $H_3C-CH-CH-CH_3$
 $H_3C-CH-CH-CH_3$
 $H_3C-CH-CH-CH_3$

2. Draw the structures for the following compounds (condensed structural formula):

$$H_3$$
C— CH_2 - C

c). 3-chloro, 1-pentanol
$$H_3C$$
— CH_2

d). 2-pentene
$$H_3C$$
— CH — CH_2 — CH_3

e). 1-butene
$$CH_2 = CH - CH_2 - CH_3$$

h). 2,2,4 trimethylhexane
$$\begin{array}{cccc}
 & CH_3 & CH_3 \\
 & CH_2 & CH_2 - CH_2 - CH_2 - CH_3
\end{array}$$

i). 2-methyl-3-ethyl hexanoic acid
$$H_3C-CH_2-CH_2-CH-CH-CH-CH-CH-CH_3$$

j). 3-hexanone
$$cH_3-cH_2-cH_2-cH_2-cH_3$$

k). 2-chloro-3,3-dimethyl hexane
$$H_3C$$
— CH — CH 2— CH 2— CH 2— CH 3

n). 3-methyl hexanoic acid
$$CH_3$$
— CH_2 — C

o). 2-methyl butanoic acid
$$H_3c$$
— cH_2 — cH_2 — cH_3

p). butyl propanoate
$$ch_3-ch_2-c$$
 $o-ch_2-ch_2-ch_2-ch_3$

- q). hexyl amine c_{H_3} — c_{H_2} — c_{H_2}
- r). 2-hexanone $H_3C CH_2 CH_2 CH_3 CH_3$
- s). diethyl ether $H_3C-CH_2-O-CH_2-CH_3$
- t). propane nitrile $H_3C-CH_2-C = N$
- u). pentanamide $H_3C-CH_2-CH_2-CH_2-CH_2-C-NH_2$
- 3. Draw the structures for the following compounds (carbon skeleton structure)
- a). propanol
- b). 2-methyl pentanal
- c). 1-bromo-3,5-dichlorobenzene

d). ethyl propanoate

e). 2-methyl, 4-hexanone

f). butyl propyl ether

g). 5-ethyl,4-fluoro, 2-heptenoic acid

h). 2,3 dimethyl butanal

i). 1-ethyl, 2-methyl cyclopentane

j). pentanamide

k). 4-cyclopentanyl-2-hexene (this is a difficult one I wouldn't use in an exam – for the fun of it)