IB Chemistry II: 10.1 and 20.1 Naming of Organic Compounds Practice

6. Listed below are the condensed structural formulas or the names for the eight isomers of $C_5H_{11}Cl$. Write either formula and the name for each.

a. $CH_3CH_2CH_2CH_2CH_2Cl$

b. $CH_3CH(CH_3)CH_2CH_2Cl$

c. 2-chloropentane

d. 2-chloro-2-methylbutane

e. $CH_3CH_2CH(Cl)CH_2CH_3$

f. $CH_3CH(CH_3)-CH(Cl)CH_3$

g. 1-chloro-2-methylbutane

h. 1-chloro-2, 2-dimethylpropane

7. Name the following compounds.

a. $CH_3CH_2C(CH_3)(CH_2CH_3)CH_2Br$

b. $CH_2=CHCH(CH_3)CH=CH_2$

c. $CH_2=CHC(CH_3)_2CH_3$

d. C_6H_5Cl

e. $CH_3CH=CHCH_2CH_3$

f. $CH_3C(CH_3)=CHCH_3$

g. $CH_3CH_2CH=CH_2$

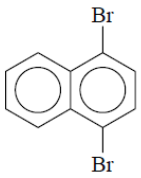
h. $CH_3CH(CH_3)CH=CHCH_3$

i. $CH_3C(CH_3)=CCH_2CH_3$

j. $CH_2=CCH_2C(CH_3)=CH_2$

k. $CH_2=C(CH_3)-C(CH_3)(CH_3)-CH=CHCH_3$

l.



13. Draw structural formulas for the

a. Ethanal

b. 2-butanone

c. 2-methyl-2-propanol

d. ethanoic acid

e. trimethanamine

f. propane

g. 2-pentyne

h. cyclobutane

i. cyclohexanamine

j. 2-aminopentane

k. 2,4-nitrophenol

l. 1,3-nitrobenzoic acid

m. ethanenitrile

n. propenoic acid

14. Draw and name the five structural isomers of hexane (C_6H_{14})

15. Draw the structural formula for each of the following.

a. 2-Methylpentane

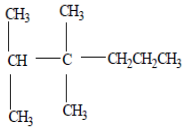
b. 2,2,4-Trimethylpentane, also called *isooctane*. This compound is the reference for octane ratings for gasoline.

c. 2-tert-Butylpentane

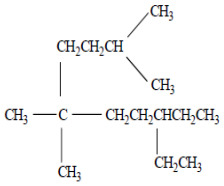
d. The name given in part c is incorrect. Give the correct name for this hydrocarbon.

16. Name each of the following:

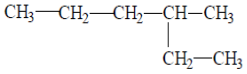
a.



b.

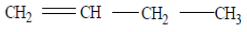


c.

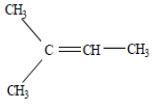


17. Name each of the following alkenes.

a.



b.



c.