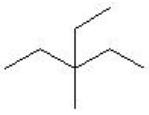
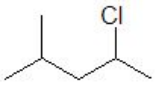
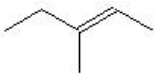
CHE 102 - Exam 1 (EP) - Chapter 19-20 - S18 - ver 1 Score: _____/74

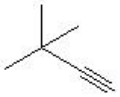
Name: _____ Class: _____ Date: _____

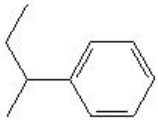
[24 pt] 1. Give the IUPAC name of the following molecules

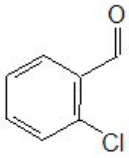
(a) 

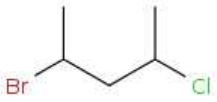
(b) 

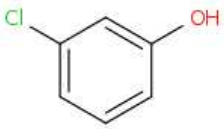
(c) 

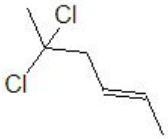
(d) 

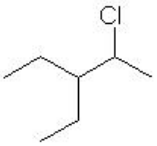
(e) 

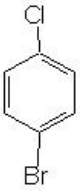
(f) 

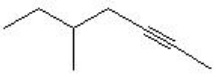
(g) 

(h) 

(i) 

(j) 

(k) 

(l) 

(a) (g)

(b) (h)

(c) (i)

(d) (j)

(e) (k)

(f) (l)

[20 pt] 2. Draw the following organic molecules:

(a) 3-heptene

(b) 2-hexyne

(c) p-bromobenzoic acid

(d) 2,2,3-trimethyl-4-nonyne

(e) 3-phenyl-1-pentene

(f) benzaldehyde

(g) toluene

(h) 2,2-dimethylbutane

(i) 4-propyloctane

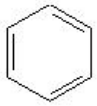
(j) 2,2-dibromo-3-chloro-6,6-diethyl-4,5-dimethyldecane

[30 pt] 3. Complete the following reactions in the format given. Assume all substitution reactions are monosubstitutions only. Circle the favored product in a reaction. Include states where appropriate. Be sure to balance any combustion reactions. If no reaction occurs put NR for the products.

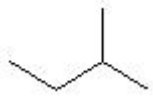
(a)  + $H_2 \longrightarrow$

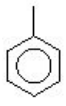
(b)  + $O_2 \longrightarrow$

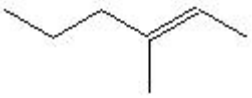
(c)  + HCl $\longrightarrow$

(d)  + $Br_2 \longrightarrow$

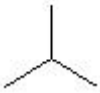
(e)  $\xrightarrow[\Delta]{500\,K}$

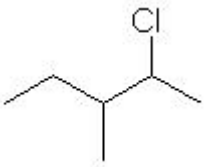
(f)  + $Cl_2 \longrightarrow$

(g)  + HCl $\longrightarrow$ ▭ +

(h)  $+ \ KMnO_4 + H_2O \longrightarrow$

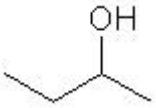
(i)  $+ \quad HCl \longrightarrow$

(j)  $+ \ H_2O \longrightarrow$

(k)  $\xrightarrow[\Delta]{500\,K}$

(l)  $+ \quad H_2 \longrightarrow$

(m)  $+ \quad H_2O \longrightarrow$

(n)  $\xrightarrow[\Delta]{500\,K}$

(o)  $+ \quad Br_2 \longrightarrow$