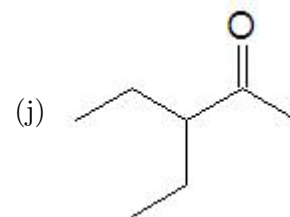
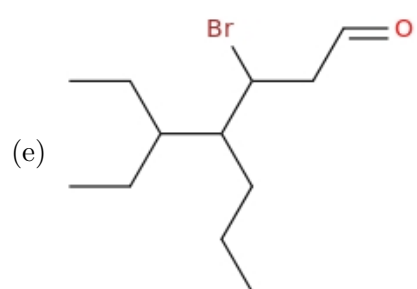
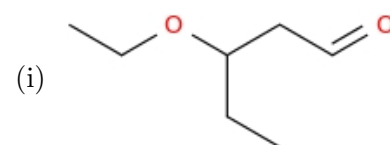
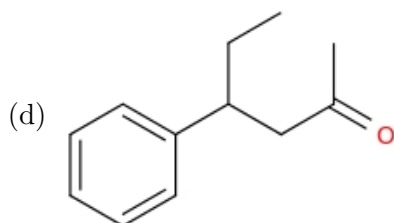
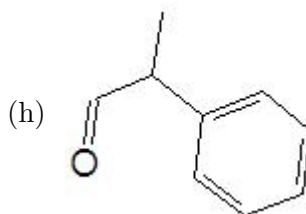
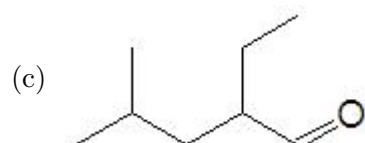
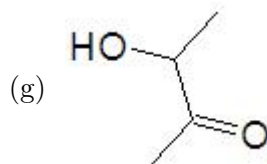
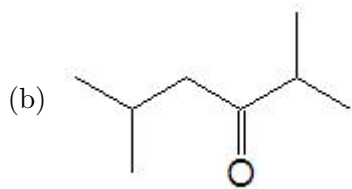


Name: _____

Date: _____

[20 pt] 1. Name the following molecules using IUPAC nomenclature:



(a)

(f)

(b)

(g)

(c)

(h)

(d)

(i)

(e)

(j)

CHE 102 - Homework - Ch 23a

[20 pt] 2. Draw the following molecules using line drawing or lewis structures.

(a) benzaldehyde

(f) 1-chloro-2-butanone

(b) 2-phenyl-4-octanone

(g) 4-hydroxypentanal

(c) 3-ethyl-4-methylpentanal

(h) 3-pentanol

(d) 2,4-dimethyl-3-hexanone

(i) 3,3-dichloro-2-pentanone

(e) 3-methoxypentanal

(j) 4-ethoxy-2-hydroxy-3-phenyldecanal

CHE 102 - Homework - Ch 23a

[3 pt] 3. What are the requirements for hydrogen bonding? In the list below, DRAW each molecule **AND** circle the molecules that are capable of hydrogen bonds between the two molecules:

Butane, 1-Butene, 1-Butyne, 1-Butanol, Ethoxyethane, Butanal, Butanone.

[6 pt] 4. Draw each molecule in the space provided. Circle the compound in the following pairs that has the higher boiling point. Explain.

(a) 2-hexanone or 2,5-hexanedione

(b) 2-pentanone or 2-pentanol

(c) propanone or butanone

[6 pt] 5. Draw each molecule in the space provided. Circle the compound in the following pairs that has the higher solubility in water. Explain.

(a) 2-hexanone or 2,5-hexanedione

(b) propane or propanal

(c) heptanal or ethanal