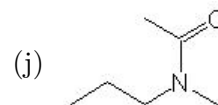
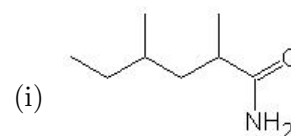
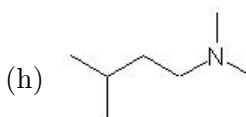
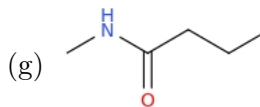
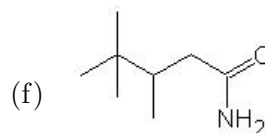
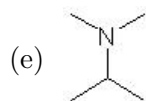
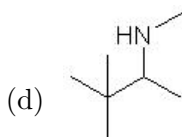
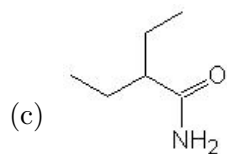
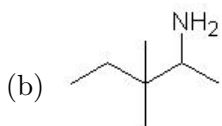
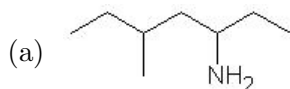


Name: _____

Date: _____

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



(a)

(f)

(b)

(g)

(c)

(h)

(d)

(i)

(e)

(j)

CHE 102 - Homework - Ch 25a

[20 pt] 2. Draw the following molecules using line formula.

(a) 3-hydroxy-2-pentanamine

(f) 2-methyl-2-heptanamine

(b) 2-ethylhexanamide

(g) 2-methyl-N-propylbutanamide

(c) 3,3-dimethyl-1-butanamine

(h) N,3,4-trimethylpentanamide

(d) N,N,3-trimethylbutanamide

(i) N-ethyl-2,2-dimethyl-1-propanamine

(e) N-ethyl-2,3-dimethylbutanamide

(j) 2-ethyl-1-pentanamine

CHE 102 - Homework - Ch 25a

- [3 pt] 3. What is the difference between primary, secondary and tertiary amines. Give an example of each.
- [6 pt] 4. Draw an example of a primary, secondary and tertiary amine **AND** amide and label all possible attractive forces that each molecule is capable of making.
- [4 pt] 5. Draw each molecule in the space provided. Circle the compound with higher boiling point. Explain.
- (a) 1-propanamine vs. N-methylethanamine
- (b) 1-propanamine vs. propanamide
- (c) 1-propanamine vs. 1-propanol
- (d) 1-propanamine vs. propanoic acid

CHE 102 - Homework - Ch 25a

[4 pt] 6. Circle the compound with higher solubility. Additionally draw each molecule in the space provided. Explain.

(a) 1-butanamine vs. 1-butanol

(b) 2-butanamine vs. N,N-dimethylethanamine

(c) N-methylbutanamide vs. N,N-dimethylpropanamide

(d) Butanoic Acid vs. Butanamide

[8 pt] 7. Draw structural formulas for all the amines having the formula $C_4H_{11}N$. Name each amine **AND** classify each as primary, secondary or tertiary amines. (8 total isomers)