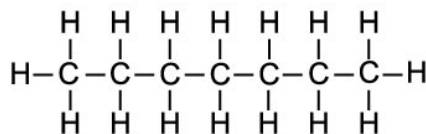
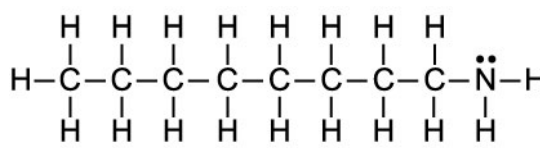
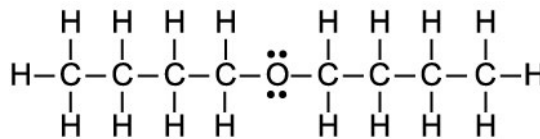
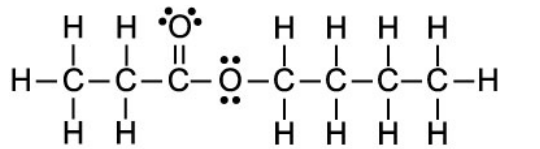
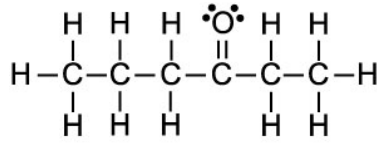
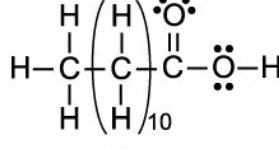
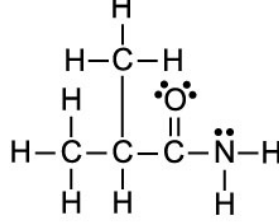
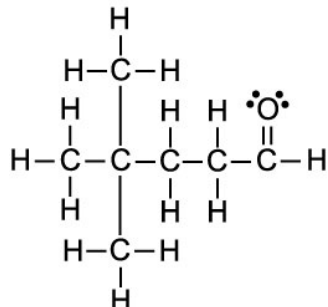
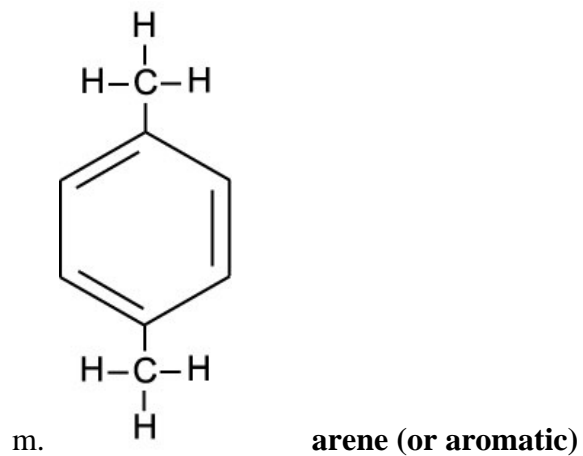
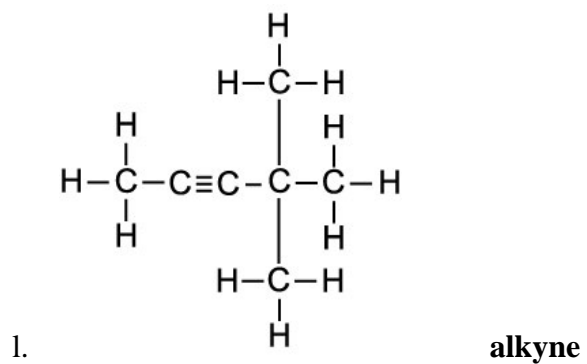
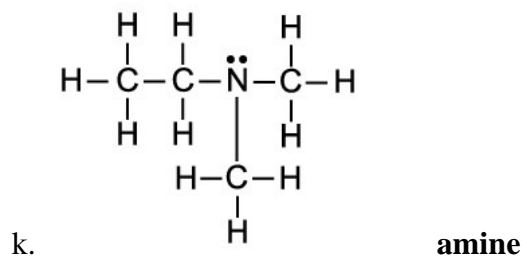
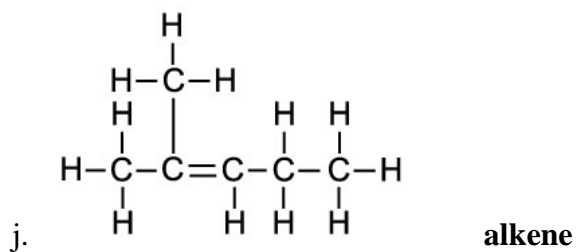
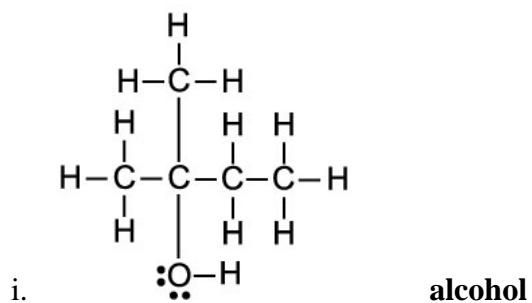


Chapter 12 Exercise Key

Exercise 12.1 – Organic Compounds: Identify each of these structures as representing an alkane, alkene, alkyne, arene (aromatic), alcohol, carboxylic acid, ether, aldehyde, ketone, ester, amine, or amide.

- a.  **alkane**
- b.  **amine**
- c.  **ether**
- d.  **ester**
- e.  **ketone**
- f.  **carboxylic acid**
- g.  **amide**
- h.  **aldehyde**



Exercise 12.2 – Condensed Formulas: Write a condensed chemical formula to represent the Lewis structures in a-m in Exercise 12.1.

- a. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ or $\text{CH}_3(\text{CH}_2)_5\text{CH}_3$
- b. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ or $\text{CH}_3(\text{CH}_2)_7\text{NH}_2$
- c. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$
- d. $\text{CH}_3\text{CH}_2\text{CO}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ or $\text{CH}_3\text{CH}_2\text{COOCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$
- e. $\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_2\text{CH}_3$
- f. $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CO}_2\text{H}$ or $\text{CH}_3(\text{CH}_2)_{10}\text{CO}_2\text{H}$
or $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{COOH}$ or
 $\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$
- g. $(\text{CH}_3)_2\text{CHCONH}_2$
- h. $(\text{CH}_3)_3\text{CCH}_2\text{CH}_2\text{CHO}$
- i. $(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{CH}_3$
- j. $(\text{CH}_3)_2\text{CCHCH}_2\text{CH}_3$
- k. $\text{CH}_3\text{CH}_2\text{N}(\text{CH}_3)_2$
- l. $\text{CH}_3\text{CCC}(\text{CH}_3)_3$

Exercise 12.3 – Line Drawings: Do a line drawing to represent the Lewis structures in a-k in Exercise 12.1.

