

Lecture 3 – Selected answers to homework

12.56 – answer in book

12.58 – answer in book

12.67 – The boiling points of the higher molecular weight alkanes are higher than those of CH_4 and C_2H_6 because London forces, which increase with increased formula weight, are greater for $\text{C}_{16}\text{H}_{34}$ and $\text{C}_{17}\text{H}_{36}$. The difference between the boiling points of CH_4 and C_2H_6 is greater than that between the boiling points of $\text{C}_{16}\text{H}_{34}$ and $\text{C}_{17}\text{H}_{36}$ because the percent difference in formula weight between CH_4 and C_2H_6 is greater than that between $\text{C}_{16}\text{H}_{34}$ and $\text{C}_{17}\text{H}_{36}$.

12.68 – Since “like dissolved like,” lipstick, which is composed primarily of hydrocarbons, is more soluble in the hydrocarbon petroleum jelly than in water.

13.50 – answer in book

13.52 – answer in book

13.54 – answer in book

13.79 –

