12.44 (a) CO₂ has the higher vapor pressure at 25°C, since the dispersion forces holding it together are far weaker than the ionic forces holding CO₂ together.

(b) The liquid with the lower normal boiling point (4.35°C) has the higher vapor pressure since it reaches a vapor pressure of 1 atm at the lower temperature.

(c) CH₃(CH₂)₃CH₃ has the higher vapor pressure since it is lighter and shorter.

(d) (CH₃)₄C has the higher vapor pressure since its spherical shape leads to weaker dispersion forces.

12.46 (a) Isooctane, (CH₃)₃CC(CH₃)₂CH(CH₃)₂

is not as long as octane, and does not experience dispersion forces as strongly as does octane.

(b) [Graph of vapor pressure (VP) vs. temperature (Temp) showing the relationship between isooctane and octane]