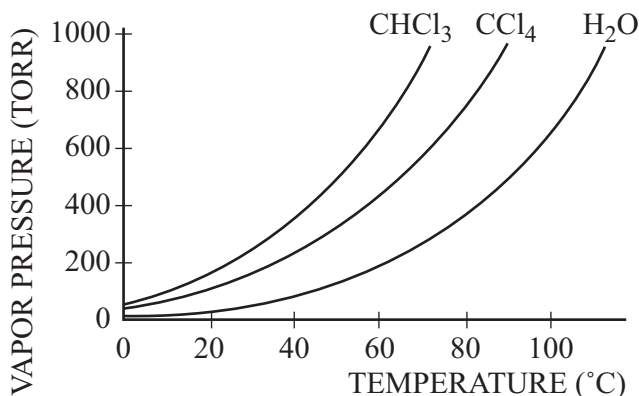
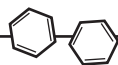


15. Which liquid below would be expected to have the highest equilibrium vapor pressure at room temperature, 25°C?



- (A) CHCl₃
 (B) H₂O
 (C) CCl₄
 (D) All three would have the same equilibrium vapor pressure at 25°C.
16. Which pairing has the substance with the higher melting point listed first?
- (A) Rb or K
 (B) LiCl or C₄H₁₀
 (C) CO₂ or CS₂
 (D) Cs or Fe
17. The explanation for why CH₄ is relatively insoluble in water is related to
- (A) the dipole-dipole attractions between H₂O molecules are stronger than the attractions between H₂O and CH₄ molecules
 (B) the size of CH₄ molecules is larger than the size of H₂O molecules
 (C) the dipole-dipole attractions between CH₄ molecules are greater than attractions between CH₄ and H₂O molecules
 (D) the attractions between CH₄ molecules are stronger than the attractions between CH₄ and H₂O molecules due to “hydrogen bonding” between CH₄ molecules
18. Which characteristic is most closely associated with covalent network solids?
- (A) High thermal conductivity, high degree of hardness
 (B) High electrical conductivity, high thermal conductivity
 (C) High melting points, high degree of hardness
 (D) High ductility, low electrical conductivity



Questions 19–23. Select your answers to questions 19–23 from the choices below.

- (A) An ionic solid
- (B) A metallic solid
- (C) A planar covalent solid
- (D) A molecular compound with non-polar molecules

19. Cu, copper wire

20. CO₂, dry ice

21. C₆H₆, benzene

22. LiNO₃, lithium nitrate crystals

23. C(*gr*), powdered graphite

24. Inexpensive sealed hand-boilers work on the principle that

- (A) Liquids have just one characteristic boiling point
- (B) Liquids boil when their vapor pressure = “atmospheric” (ambient) pressure.
- (C) Liquids will not boil under low atmospheric pressure conditions.
- (D) Heat from one’s hand is insufficient to boil a liquid.

25. Which intermolecular forces are NOT found in liquified NH₃?

- (A) Ionic bonds
- (B) Dipole-dipole attractions
- (C) London Dispersion forces
- (D) “Hydrogen bonds”