MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) What mass of water would need to evaporate from your skin in order to dissipate 1.70×10^5 J of heat from the surface of your body?
$H_2O(l) \rightarrow H_2O(g)$ $\Delta H_{vap} = 40.7$ kJ/mol 1) _____

A) 4.18 g B) 2.26 g C) 4.18×10^3 g D) 75.2 g

2) Place the substances in order of increasing melting point. 2) _____

CH_4 C_3H_8 C_2H_4

A) $C_3H_8 < C_2H_4 < CH_4$ B) $C_2H_4 < C_3H_8 < CH_4$
C) $CH_4 < C_2H_4 < C_3H_8$ D) $C_3H_8 < CH_4 < C_2H_4$

3) Ethylene glycol, used as a coolant in automotive engines, has a specific heat capacity of 2.42 J/g·°C. Calculate q when 3.65 kg of ethylene glycol is cooled from 132°C to 85°C. 3) _____

A) −99 kJ B) −420 kJ
C) −0.42 kJ D) -4.2×10^{-6} kJ

4) The specific heat (capacity) is 4) _____

A) amount of energy needed to change 1 g of a substance by 1°C.
B) amount of energy required to melt 1 g of substance.
C) amount of energy needed to change 1 mol of a substance by 1°C
D) the temperature increase, in K, associated with heating 1 g of a substance for 1 minute.
E) amount of substance that is heated by 1°C.

5) Place the substances in order of increasing viscosity. 5) _____

$CH_3CH_2CH_2CH_3$ $H_2NCH_2CH_2NH_2$ $CH_3CH_2CH_2NH_2$

A) $H_2NCH_2CH_2NH_2 < CH_3CH_2CH_2NH_2 < CH_3CH_2CH_2CH_3$
B) $H_2NCH_2CH_2NH_2 < CH_3CH_2CH_2CH_3 < CH_3CH_2CH_2NH_2$
C) $CH_3CH_2CH_2CH_3 < CH_3CH_2CH_2NH_2 < H_2NCH_2CH_2NH_2$
D) $CH_3CH_2CH_2CH_3 < H_2NCH_2CH_2NH_2 < CH_3CH_2CH_2NH_2$

6) What is the process in which molecules undergo a phase change from the liquid phase to the gas phase? 6) _____

A) vaporization B) condensation C) freezing D) sublimation

Answer Key
Testname: MINI-PRAC CH7

1) D
2) C
3) B
4) A
5) C
6) A