Name: _____,_____   Date: _____
Worksheet # 1 (Chapter 13)

1) The dissolution of water in octane (C_8H_{18}) is prevented by _____.
A) London dispersion forces between octane molecules
B) hydrogen bonding between water molecules
C) dipole-dipole attraction between octane molecules
D) ion-dipole attraction between water and octane molecules
E) repulsion between like-charged water and octane molecules

2) When argon is placed in a container of neon, the argon spontaneously disperses throughout the neon because _____.
A) of the large attractive forces between argon and neon atoms
B) of hydrogen bonding
C) a decrease in energy occurs when the two mix
D) the dispersion of argon atoms produces an increase in disorder
E) of solvent-solute interactions

3) Hydration is a specific example of the phenomenon known generally as _____.
A) salutation
B) disordering
C) solvation
D) condensation
E) dilution

4) The dissolution of gases in water is virtually always exothermic because _____.
A) one of the two endothermic steps (separation of solute particles) in the solution-formation process is unnecessary
B) the exothermic step in the solution-formation process is unnecessary
C) gases react exothermically with water
D) neither of the two endothermic steps in the solution-formation process is necessary
E) all three steps in the solution-formation process are exothermic

5) Formation of solutions where the process is endothermic can be spontaneous provided that _____.
A) they are accompanied by another process that is exothermic
B) they are accompanied by an increase in order
C) they are accompanied by an increase in disorder
D) the solvent is a gas and the solute is a solid
E) the solvent is water and the solute is a gas

6) The phrase "like dissolves like" refers to the fact that _____.
A) gases can only dissolve other gases
B) polar solvents dissolve polar solutes and nonpolar solvents dissolve nonpolar solutes
C) solvents can only dissolve solutes of similar molar mass
D) condensed phases can only dissolve other condensed phases
E) polar solvents dissolve nonpolar solutes and vice versa