This print-out should have 8 questions. Multiple-choice questions may continue on the next column or page – find all choices before answering.

**Mlib 04 1135**
**001** 10.0 points

The vapor pressure of all liquids

1. is the same at their freezing points.
2. is the same at 100°C.
3. increases with volume of liquid present.
4. increases with temperature.
5. decreases with the increasing volume of the container.

**Msci 01 0101**
**002** 10.0 points

Based on the general concepts that govern intermolecular attractions, which of the following orderings of boiling points of the fluoro carbons

1) CF₄
2) F₃C——(CF₂)₄——CF₃
3) F₃C——(CF₂)₂——CF₃

is correct when going from highest to lowest?

1. BP₁, BP₃, BP₂
2. BP₃, BP₂, BP₁
3. BP₂, BP₁, BP₃
4. BP₁, BP₂, BP₃
5. BP₂, BP₃, BP₁

**ChemPrin3e 05 11a 12c**
**004** 10.0 points

Which of HCl or NaCl is likely to have the higher normal boiling point?

1. They are same
2. NaCl
3. HCl

**Mlib 04 2003**
**005** 10.0 points

A liquid with a high vapor pressure is called

1. cold.
2. hot.
3. viscous.
4. volatile.

**Sparks vp 001**
**006** 10.0 points

Which would you expect to have the highest vapor pressure at a given temperature?

1. Cannot predict from the molecular formula
2. C₂H₆
3. C₅H₁₂
4. SBr₄

**ChemPrin3e T05 25**
**003** 10.0 points

Tetrabromomethane has a higher boiling point than tetrachloromethane.

1. False
2. True

**VDB Vapor Pressure Rank by IMF**
**007** 10.0 points

Rank the following in order of increasing vapor pressure at a fixed temperature: H₂O, CH₃Cl, He, NaCl

1. H₂O < NaCl < CH₃Cl < He
2. H₂O < CH₃Cl < He < NaCl
3. $NaCl < CH_3Cl < H_2O < He$

4. $He < H_2O < CH_3Cl < NaCl$

5. $NaCl < H_2O < CH_3Cl < He$

Identify the kinds of intermolecular forces that might arise between molecules of CH$_3$OH.

1. London forces, dipole-dipole

2. dipole-dipole

3. hydrogen bonding

4. None of these

5. London forces

6. London forces, dipole-dipole, hydrogen bonding