Structure and Properties of Matter — Practice Test

Ontario Chemistry, Grade 12, University Preparation (SCH4U) • 10 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Oil does not dissolve in water because oil is mainly**

- A Metallic
- B Acidic
- C Nonpolar
- D Ionic

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2 **First ionization energy generally decreases down a group because the outer electron is**

A In a lower shell

B Closer to the nucleus

C Unpaired

D Farther and more shielded

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3 **Which ion is larger than its parent atom**

A Chloride ion

B Magnesium ion

C Aluminium ion

D Sodium ion

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4 **A cation is smaller than its parent atom because it has**

- **A** More protons
- **B** Fewer electrons and less repulsion
- **C** A new shell
- **D** More electrons

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5 **The melting point of magnesium is higher than that of sodium because magnesium has**

- **A** No metallic bonding
- **B** More delocalized electrons and stronger metallic bonding
- **C** Covalent bonds
- **D** Fewer delocalized electrons

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6 **Which allotrope of carbon is used as a lubricant**

A Graphite

B Diamond

C Coal

D Fullerene only

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7 **Silicon dioxide has a high melting point because it is a**

A Ionic solid

B Molecular solid

C Metallic solid

D Network covalent solid

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8 **A hydrogen bond is an attraction between a hydrogen atom and a lone pair on**

- A A metal ion
- B Carbon
- C A carbon atom
- D Nitrogen oxygen or fluorine on another molecule

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9 **Which compound has the lowest boiling point**

- A Methane
- B Hydrogen fluoride
- C Water
- D Ammonia

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10 **The shape of phosphorus trichloride is**

A Tetrahedral

B Trigonal planar

C Linear

D Trigonal pyramidal

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ANSWER KEY

1.	C	**5.**	B	**9.**	A
2.	D	**6.**	A	**10.**	D
3.	A	**7.**	D		
4.	B	**8.**	D		

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