ALBERTA CHEMISTRY 20 · UNIT A · 10 QUESTIONS

Diversity of Matter and Chemical Bonding — Practice Test

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 **Lead forms a Pb^{2+} ion, and the nitrate ion is NO_3^-. The formula of lead(II) nitrate is**

- **A** $PbNO_3$
- **B** $Pb(NO_3)_3$
- **C** Pb_2NO_3
- **D** $Pb(NO_3)_2$

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2 **The total number of valence electrons in a carbonate ion, CO_3^{2-}, is _____.**

ANSWER _____

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3 **The shape of an ammonia molecule, NH_3, is**

A trigonal pyramidal

B tetrahedral

C bent

D trigonal planar

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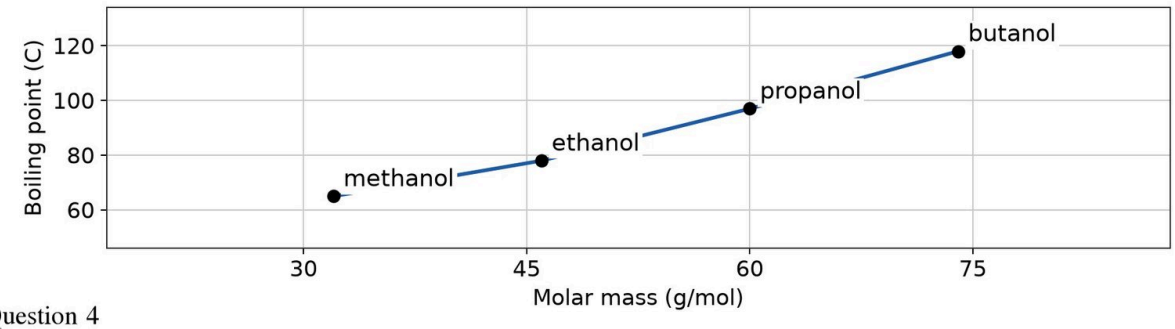
4

The graph below plots the boiling point of each alcohol against its molar mass. Which alcohol has the strongest intermolecular forces?



Question 4

The graph below plots the boiling point of each alcohol against its molar mass. Which alcohol has the strongest intermolecular forces?

A) methanol

B) ethanol

C) propanol

D) butanol

A methanol

B ethanol

C propanol

D butanol

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5 **In the Lewis diagram of carbon dioxide, CO_2, the total number of lone pairs of electrons in the molecule is ____.**

Question 5

In the Lewis diagram of carbon dioxide, CO_2, the total number of lone pairs of electrons in the molecule is ____.

ANSWER _____

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6 **The correct name of the hydrate $CuSO_4 \cdot 5H_2O$ is**

A copper(II) sulfate pentahydrate

B copper(I) sulfate pentahydrate

C copper sulfate pentahydrate

D copper(II) sulfite pentahydrate

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7 **The total number of oxygen atoms in two formula units of calcium phosphate, $Ca_3(PO_4)_2$, is ____.**

ANSWER _____

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8 **A covalent bond formed between two atoms that have identical electronegativity values is best described as**

- A polar covalent
- B ionic
- C nonpolar covalent
- D metallic

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9 **Which of the following molecules is polar?**

- A $CHCl_3$
- B CCl_4
- C BF_3
- D CH_4

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10 **Which of the following substances has the strongest intermolecular forces?**

A HCl

B HBr

C HF

D HI

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ANSWER KEY

1.	D	**5.**	4	**9.**	A
2.	24	**6.**	A	**10.**	C
3.	A	**7.**	16		
4.	D	**8.**	C		

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