

Brett Robbins Academic Consulting

Chemistry 20 Practice Test

Unit A: Diversity of Matter and Chemical Bonding

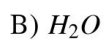
10 Questions

Original practice questions written to the Alberta curriculum, in the style of past diploma examinations. Work through each question, then check your answers with the key at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, contact Brett for clarification.

Question 1

Which of the following compounds is an ionic compound?



Question 2

Calcium forms a Ca^{2+} ion and chlorine forms a Cl^- ion.

The formula of calcium chloride is



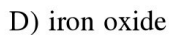
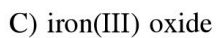
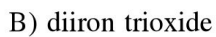
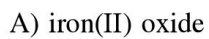
Question 3

The total number of atoms in one formula unit of $Ca(OH)_2$ is ____.

Question 4

In the compound Fe_2O_3 , each iron ion has a charge of 3+.

The correct name of this compound is



Question 5

The number of sulfur atoms in one formula unit of $Al_2(SO_4)_3$ is

- | | |
|------|------|
| A) 1 | B) 3 |
| C) 2 | D) 4 |

Question 6

In the Lewis diagram of ammonia, NH_3 , the nitrogen atom forms a single bond to each hydrogen atom. The number of bonding pairs of electrons around the nitrogen atom is

- | | |
|------|------|
| A) 1 | B) 2 |
| C) 3 | D) 4 |

Question 7

Which of the following compounds contains a polyatomic ion?

- | | |
|-----------|-------------|
| A) $NaCl$ | B) MgO |
| C) FeS | D) $CaCO_3$ |

Question 8

The total number of atoms in one formula unit of ammonium nitrate, NH_4NO_3 , is ____.

Question 9

The shape of a methane molecule, CH_4 , is

- A) tetrahedral
- B) trigonal planar
- C) bent
- D) linear

Question 10

A substance does not conduct electricity as a solid, but does conduct electricity when molten. The substance is most likely

- A) glucose, $C_6H_{12}O_6$
- B) diamond
- C) sodium chloride
- D) copper

Answer Key

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

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