

**Ionic Compounds and Chemical Formulas**

Total questions: 15

Worksheet time: 10mins

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Rifa&amp;#39;i

Name

Class

Date

1. What is a cation?

- |  |  |
|--|--|
| a) A cation is a positively charged ion. | b) A cation is a negatively charged ion. |
| c) A cation is a neutral atom.           | d) A cation is an ion with no charge.    |

2. What is an anion?

- |  |                                    |
|--|------------------------------------|
| a) An anion is a negatively charged ion. | b) An anion is a neutral particle. |
| c) A cation is a positively charged ion. | d) An anion is a type of molecule. |

3. What is the charge of a sodium ion ( $\text{Na}^+$ )?

- |       |       |
|-------|-------|
| a) +2 | b) +1 |
| c) -1 | d) 0  |

4. What is the charge of a chloride ion ( $\text{Cl}^-$ )?

- |       |       |
|-------|-------|
| a) -1 | b) -2 |
| c) 0  | d) +1 |

5. What is the name of the compound with the formula  $\text{NaCl}$ ?

- |                       |                   |
|-----------------------|-------------------|
| a) Sodium bicarbonate | b) Sodium sulfate |
| c) Sodium chloride    | d) Sodium acetate |

6. The formula for a compound formed between magnesium ( $\text{Mg}$ ) and oxygen ( $\text{O}$ ) is \_\_\_\_.

Ans. \_\_\_\_\_

7. Write the chemical formula for potassium sulfate.

Ans. \_\_\_\_\_

8. What is the charge of the sulfate ion ( $\text{SO}_4^{2-}$ )?

- |       |       |
|-------|-------|
| a) -1 | b) +1 |
| c) -2 | d) 0  |

9. Fill in the blank: The formula for a compound formed between aluminum (Al) and sulfate ( $\text{SO}_4$ ) is \_\_\_\_.

Ans. \_\_\_\_\_

10. Name the compound with the formula  $\text{Fe}_2\text{O}_3$ .

- |                   |                    |
|-------------------|--------------------|
| a) Iron oxide     | b) Ferric oxide    |
| c) Iron(II) oxide | d) Iron(III) oxide |

11. Predict the formula for a compound formed between copper (II) and nitrate ( $\text{NO}_3$ ).

- |                               |                                 |
|-------------------------------|---------------------------------|
| a) $\text{Cu}(\text{NO}_3)_3$ | b) $\text{Cu}_2(\text{NO}_3)_2$ |
| c) $\text{Cu}(\text{NO}_3)_2$ | d) $\text{Cu}(\text{NO}_2)_2$   |

12. 16. True or False: Transition metals can have multiple oxidation states.

- |         |          |
|---------|----------|
| a) True | b) False |
|---------|----------|

13. Write the chemical formula for ammonium phosphate.

Ans. \_\_\_\_\_

14. What is the name of the compound with the formula  $\text{Ca}(\text{OH})_2$ ?

- |                      |                      |
|----------------------|----------------------|
| a) Calcium carbonate | b) Calcium sulfate   |
| c) Calcium oxide     | d) Calcium hydroxide |

15. Fill in the blank: The formula for a compound formed between barium (Ba) and fluoride (F) is \_\_\_\_.

Ans. \_\_\_\_\_