

## Answers

### Physical Science 10: Chemistry Exam Review Chapter 5

1. Define and give an example of an atom, element and compound

An element is a pure substance that cannot be broken down i.e. H, C, O, N etc

A compound is a pure substance that contains two or more elements i.e. NaCl, MgO etc

A molecule is made up of at least two atoms different from each other or two atoms of the same element i.e. O<sub>2</sub>, F<sub>2</sub>, H<sub>2</sub>O

2. Write the names of the following molecular compounds:

a) CO<sub>2</sub> carbon dioxide

b) N<sub>2</sub>O<sub>5</sub> dinitrogen pentaoxide

c) PF<sub>5</sub> phosphorous pentafluoride

d) NH<sub>3</sub> ammonia or nitrogen trihydride

e) CCl<sub>4</sub> carbon tetrachloride

3. Write the formulas for the following molecular compounds:

a) dinitrogen monoxide N<sub>2</sub>O

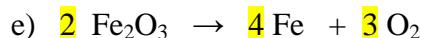
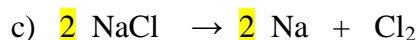
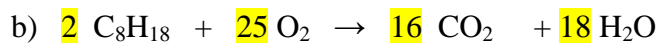
b) diphosphorous hexabromide P<sub>2</sub>Br<sub>6</sub>

c) sulfur dioxide SO<sub>2</sub>

d) silicon tetrahydride SiH<sub>4</sub>

e) nitrogen diselenide NSe<sub>2</sub>

4. Balance the following equations



5. Write the names of the following ionic compounds:

- a)  $\text{LiCl}$                       lithium chloride
- b)  $\text{Mg}_3\text{P}_2$                     magnesium phosphide
- c)  $\text{Ba}(\text{NO}_3)$                 barium nitrate
- d)  $\text{K}_3\text{PO}_4$                     potassium phosphate
- e)  $\text{CsOH}$                       cesium hydroxide
- f)  $\text{Ca}_3(\text{PO}_4)_2$             calcium phosphate
- g)  $\text{FeO}$                         iron (II) oxide
- h)  $\text{PbO}_2$                       lead (IV) oxide

6. Write the formulas for the following ionic compounds:

- a) barium hydroxide             $\text{Ba}(\text{OH})_2$
- b) iron (II) fluoride             $\text{FeF}_2$
- c) calcium sulfide              $\text{Ca}_2\text{S}$
- d) copper (I) sulfate             $\text{Cu}_2\text{SO}_4$
- e) cobalt (III) iodide          $\text{CoI}_3$
- f) aluminum oxide              $\text{Al}_2\text{O}_3$
- g) sodium carbonate           $\text{Na}_2\text{CO}_3$
- h) iron (III) nitrate           $\text{Fe}(\text{NO}_3)_3$