

Sample Questions for the Chemistry Placement Exam

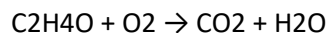
Note: These questions are intended to represent the general level of difficulty and areas of coverage of the Chemistry Placement Exam.

They are NOT intended to be a complete representation of the specific types of questions to be found on the exam.

1. Aluminum reacts with element X to form a compound with the formula Al_2X_3 . Element X exists as diatomic molecules, X_2 , in the gaseous state at normal temperature and pressure. Element X must be:

- a) Nitrogen
- b) Oxygen
- c) Sulfur
- d) Chlorine

2. What is the coefficient of O_2 when the following equation is balanced?



- a) 2
- b) 3
- c) 4
- d) 5

3. How many moles of GeH_4 are needed to form 8.00 moles of GeF_3H according to the following reaction?



- a) 2.00
- b) 4.00
- c) 8.00
- d) 16.00

4. According to its location in the periodic table, the element bromine (element # 35) is best described as:

- a) A metal
- b) A nonmetal
- c) A transition metal
- d) A metalloid

5. Which of the following species is neither acidic nor basic when dissolved in water?

- a) HCl
- b) NH_3
- c) $NaCl$
- d) $NaHCO_3$

6. To the correct number of significant figures, the result of the following calculation $[(11.13 - 2.6) \times 10^4] / [103.15 \times 10^{-6}]$ should be reported as:

- a) 8.27×10^8

- b) 8.3×10^{-4}
- c) 8.3×10^8
- d) 8.27×10^{-8}