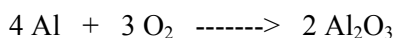


This quiz will be machine-scored. Check to ensure that your WebCT ID is correctly coded beginning in the first column of the USER NAME section. Read each question carefully and mark only the best answer with pencil in the appropriate space on the answer sheet. You should also mark your answers on this sheet and keep it. Exam keys and grade results will be posted on WebCT as soon as available.

- \_\_\_\_\_ 33. Which of the following represents a physical change only?
- Ozone is made from oxygen by lightning
  - Dew forms on grass at night
  - Gasoline fuel powers an automobile engine
  - A candle is ignited
  - A glass of milk is digested
- \_\_\_\_\_ 34. Which of the following name/formula pairs is INCORRECT?
- sodium phosphide /  $\text{Na}_3\text{P}$
  - potassium carbonate /  $\text{K}_2\text{CO}_3$
  - barium nitrate /  $\text{BaNO}_2$
  - iron (III) sulfate /  $\text{Fe}_2(\text{SO}_4)_3$
  - magnesium chloride /  $\text{MgCl}_2$
- \_\_\_\_\_ 35. An atomic mass unit (amu) is defined as...
- 1/16 the mass of an oxygen atom
  - the mass of a proton
  - the mass of a hydrogen atom
  - 1/12 the mass of a carbon atom
  - the atomic weight of an element expressed in grams
- \_\_\_\_\_ 36. The percent chlorine in the pesticide DDT,  $\text{C}_{14}\text{H}_9\text{Cl}_5$ , is ...
- 45.3
  - 50.0
  - 61.4
  - 52.1
  - 47.4
- \_\_\_\_\_ 37. Based on the balanced equation below, how many molecules of  $\text{O}_2$  would react exactly with 8 molecules of ethane ( $\text{C}_2\text{H}_6$ )?
- $$2 \text{C}_2\text{H}_6 + 7 \text{O}_2 \longrightarrow 4 \text{CO}_2 + 6 \text{H}_2\text{O}$$
- 28
  - 16
  - 24
  - 14
  - 7
- \_\_\_\_\_ 38. A compound is composed of 70.6 % carbon, 5.9 % hydrogen, and 23.5 % oxygen. The molecular weight of this compound is 136. How many atoms of carbon are in one molecule of this compound?
- 4
  - 5
  - 7
  - 8
  - 9
- \_\_\_\_\_ 39. How many moles of silicon atoms are contained in 53.5 g of silicon?
- 1.91
  - $1.15 \times 10^{24}$
  - 1.67
  - $1.97 \times 10^{-24}$
  - 3.82
- \_\_\_\_\_ 40. How many grams of  $\text{PbI}_2$  could be made from the complete reaction of 6.5 g of KI with excess lead nitrate, according to the following equation.
- $$\text{Pb}(\text{NO}_3)_2 + 2 \text{KI} \longrightarrow \text{PbI}_2 + 2 \text{KNO}_3$$
- 2.3 g
  - 9.0 g
  - 18 g
  - 36 g
  - 3.2 g
- \_\_\_\_\_ 41. In a homogeneous mixture, the material, typically in lesser amount, that is dissolved is the ...
- solvent
  - solute
  - diluent
  - solution
  - concentrate
- \_\_\_\_\_ 42. Determine the formula weight of bismuth sulfate,  $\text{Bi}_2(\text{SO}_4)_3$ .
- 257 amu
  - 353 amu
  - 433 amu
  - 514 amu
  - 706 amu
- \_\_\_\_\_ 43. Which of the following is NOT the same as 0.719 grams?
- 71.9 cg
  - $7.19 \times 10^8 \text{ ng}$
  - $7.19 \times 10^5 \text{ }\mu\text{g}$
  - $7.19 \times 10^{-4} \text{ kg}$
  - $7.19 \times 10^{-2} \text{ mg}$
- \_\_\_\_\_ 44. If 25.0 mL of 18.0 M sulfuric acid ( $\text{H}_2\text{SO}_4$ ) is diluted to 500 mL, the molarity of the dilute solution is ...
- 3.6 M
  - 1.1 M
  - 0.90 M
  - 0.72 M
  - 6.9 M

For questions 45-47 which follow, 2.50 g of aluminum and 2.50 g of oxygen are reacted to produce 3.50 g of aluminum oxide. The equation for the process is...





CHEM 1110-001

Exam 1 Keys

(See Form A to correlate with questions on other forms.)

	<b>Test Form</b>			
Question #	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
33	b	d	c	a
34	c	d	b	e
35	d	b	a	c
36	b	a	d	b
37	a	d	c	d
38	d	c	b	a
39	a	e	e	b
40	b	b	a	e
41	c	a	c	c
42	e	d	e	d
43	d	c	c	b
44	c	c	a	b
45	c	a	d	a
46	d	c	c	a
47	a	a	e	a
48	c	c	a	a
49	b	c	c	c
50	e	e	d	c
51	e	c	a	c
52	a	a	c	b
53	d	b	c	b
54	d	c	d	e
55	c	c	c	b
56	b	a	d	b
57	d	e	c	e
58	b	d	a	b
59	b	c	b	d