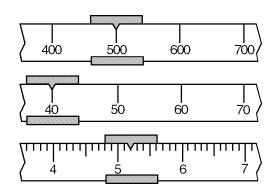
Name: _			
1)	In the laboratory a student determined the atomic mass of an element to be 28.02. The accepted value is 28.086. What is the difference between the student's observed value and the accepted value, expressed to the correct number of significant figures? 1) 0.066 3) 0.10 2) 0.07 4) 0.1	6)	Which formula represents a mixture? 1) NH ₃ (g) 2) NH ₃ (s) 3) NH ₃ (aq) 4) NH ₃ (l) What is the number 2.1 × 10 ³ expressed in
2)	 2) 0.07 4) 0.1 Which pair is classified as a substance? 1) compounds and mixtures 2) elements and compounds 3) elements and solutions 4) elements and mixtures 		conventional form with the proper number of significant digits? 1) 21,000. 2) 0.0021 3) 2,100 4) 2,100.
3)	Which could be the chemical formula of an element? 1) AB 2) aB 3) Ab 4) ab The particle diagram below represents a	8)	When sugar is dissolved in water, the resulting solution is classified as a 1) homogeneous mixture 2) heterogeneous mixture 3) heterogeneous compound
	sample of matter.	9)	 4) homogeneous compound Matter is defined as anything that occupies space and has 1) mass 2) color 3) odor 4) a definite shape
5)	Which <i>best</i> describes the composition of the sample? 1) a mixture of elements 2) a single compound 3) a single element 4) a mixture of compounds Using the rules for significant figures, the sum of 0.027 gram and 0.0023 gram should be expressed as 1) 0.0293 gram 2) 0.030 gram 3) 0.029 gram 4) 0.03 gram	10)	In an equation, what symbol would indicate a mixture? 1) (s) 3) (g) 2) (\$\mathcal{L}\$) (aq)

11)	The diagram below shows a portion of a buret. What is the reading of the meniscus?	14)	The particle diagram below represents a sample of matter.
	31		
	32		Which <i>best</i> describes the composition of the sample?
	1) 31.72 ml		1) a mixture of compounds
	2) 32.28 ml		2) a mixture of elements and compounds
	3) 32.72 ml		3) a single compound
4.0	4) 31.28 ml		4) a mixture of elements
12)	The list below shows four samples: A , B , C , and D .	15)	Which of the following is an example of a compound?
	(A) HCW)		1) Na 3) O ₂
	(A) HCl(aq) (B) NaCl(aq)		2) Ar 4) CO ₂
	(C) HCl(g) (D) NaCl(s)	16)	Which substance can <i>not</i> be decomposed by a chemical change?
			1) carbon monoxide (CO)
	Which samples are substances?		2) carbon dioxide (CO ₂)
	1) A and B		3) methane (CH ₄)
	2) C and D		4) carbon (C)
	3) C and B4) A and C	17)	Which is a formula of a binary compound?
13)			1) BiPO ₄
13)	Which measurement contains three significant figures?		2) BaSO ₄
	1) 0.0563 g		3) Mg(ClO) ₂
	2) 0.05 g		4) MgCl ₂
	3) 0.050 g	18)	Which measurement contains a total of three
	4) 0.056 g		significant figures?
			1) 1,205 g
			2) 12,050 g
			3) 0.125 g
			4) 0.012 g

____19) The diagram below represents a portion of a triple-beam balance.



If the beams are in balance with the riders in the positions shown, what is the total mass of the object?

- 1) 545.20 g
- 2) 540.52 g
- 3) 540.20 g
- 4) 545.52 g

____ 20) Burning is an example of a change that is

- 1) chemical
- 2) physical
- 3) intensive
- 4) endothermic

21) Expressed to the correct number of significant figures, what is the correct sum of (3.04 g + 4.134 g + 6.1 g)?

- 1) 13.274 g
- 2) 13.27 g
- 3) 13.3 g
- 4) 13 g

22) Which of the following is a chemical property of copper?

- 1) It is a good conductor of heat and electricity.
- 2) It reacts in moist air to produce green copper carbonate.
- 3) It has a shiny metallic luster.
- 4) It melts when heated to 1083 °C.

23) Given: (52.6 cm)(1.214 cm)

What is the product expressed to the correct number of significant figures?

- 1) 63.86 cm²
- 2) 63.9 cm²
- 3) 64 cm²
- 4) 63.8564 cm²

24) Which of the following can *not* be decomposed into simpler substances?

- 1) mixtures
- 2) compounds
- 3) solutions
- 4) elements

25) What is the number 8.90 × 10⁻⁴ expressed in conventional form with the correct number of significant digits?

- 1) 89,000.
- 2) 0.00089
- 3) 89,000
- 4) 0.000890

___ 26) Which of the following is a chemical property of water?

- 1) it boils
- it decomposes into H₂ and O₂
- 3) it evaporates
- 4) it freezes

__ 27) The particles in a crystalline solid are arranged

- 1) randomly and close together
- 2) regularly and far apart
- 3) regularly and close together
- 4) randomly and far apart

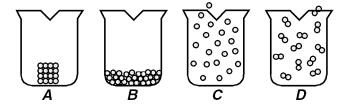
The mass of a solid is 3.60 grams and its volume is 1.8 cubic centimeters. What is the density of the solid, expressed to the correct number of significant figures?

1) 2.0 g/cm³

28)

- 0.5 g/cm^3
- 3) 2 g/cm³
- 4) 0.50 g/cm^3

- ____29) The length of a block of metal is 5.5 cm, its width is 1.25 cm, and its height is 8.75 cm. What is the volume of the block expressed to the correct number of significant figures?
 - 1) 60.16 cm^3
 - 2) 60.2 cm^3
 - 3) 60. cm³
 - 4) 60 cm^3
- ____ 30) The particle diagrams below represent elements at STP.



Which particle diagram best represents a substance in the solid state?

1) *A*

2) *B*

3) *C*

4) *D*