1

Student: _____

1. Ammonia is a compound of nitrogen and hydrogen only. A certain gaseous combination of nitrogen and hydrogen looks uniform throughout and has no smell. The combination is a(n)
   A. element.
   B. compound.
   C. heterogeneous mixture.
   D. homogeneous mixture.

2. A certain combination of hydrogen and oxygen gases has a definite composition and is liquid under ordinary conditions in a room, but is **not** water. The combination is a(n)
   A. element.
   B. compound.
   C. heterogeneous mixture.
   D. homogeneous mixture.

3. A solid sample of a pure substance was heated in the open atmosphere, and a silver-colored solid resulted that weighed 23% less than the original sample. Reheating produced no further change. Classify the sample as a(n)
   A. element.
   B. compound.
   C. heterogeneous mixture.
   D. homogeneous mixture.

4. A certain sample of a pure liquid substance was heated in the open atmosphere, and a solid weighing 21% more than the original sample resulted. Classify the solid as a(n)
   A. element.
   B. compound.
   C. heterogeneous mixture.
   D. homogeneous mixture.

5. When a certain sample of a substance is heated in air, it gains 5.90% in mass. The product is brown with gray areas in it. Classify the product as a(n)
   A. element.
   B. compound.
   C. heterogeneous mixture.
   D. homogeneous mixture.

6. Which one of the following properties is **not** intensive?
   A. density
   B. boiling point
   C. color
   D. volume

7. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is homogeneous.
   True False

8. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is heterogeneous.
   True False

9. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is a compound?
   True False

10. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is an element?
    True False

11. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance has a mass greater than that of the liquid.
    True False

12. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance has a mass equal to that of the gas plus the liquid.
    True False

13. How many elements are present in Si?
    A. 1
    B. 2
    C. 3
    D. 4

14. How many elements are present in SI_2?
    A. 1
    B. 2
    C. 3
    D. 4

15. How many elements are present in NH_4NO_3?
    A. 1
    B. 2
    C. 3
    D. 4
    E. 9

16. How many elements are present in $NoCl_2$?
    A. 1
    B. 2
    C. 3
    D. 4

17. How many elements are present in NOCl?
    A. 1
    B. 2
    C. 3
    D. 4

18. How many elements are present in He?
    A. 1
    B. 2
    C. 3
    D. 4

19. How many elements are present in $Co_2(CO)_9$?
    A. 1
    B. 2
    C. 3
    D. 4
    E. more than 4

20. How many elements are present in CH_3CH_2OH?
    A. 1
    B. 2
    C. 3
    D. 4
    E. more than 4

21. P is the symbol for
    A. phosphorus.
    B. bromine.
    C. calcium.
    D. gold.
    E. potassium.
    F. carbon.

22. Au is the symbol for
    A. phosphorus.
    B. bromine.
    C. calcium.
    D. gold.
    E. oxygen.
    F. silver.

23. C is the symbol for
    A. cobalt.
    B. cesium.
    C. calcium.
    D. gold.
    E. chromium.
    F. carbon.

24. Br is the symbol for
    A. phosphorus.
    B. bromine.
    C. calcium.
    D. gold.
    E. oxygen.
    F. boron.

25. O is the symbol for
    A. phosphorus.
    B. bromine.
    C. calcium.
    D. gold.
    E. oxygen.
    F. carbon.

26. Ca is the symbol for
    A. cerium.
    B. cobalt.
    C. calcium.
    D. gold.
    E. oxygen.
    F. carbon.

27. Select the symbol for potassium.
    A. Ca
    B. K
    C. Mn
    D. P
    E. Po
    F. Na

28. Select the symbol for copper.
    A. Ca
    B. K
    C. Cs
    D. Cu
    E. Co
    F. C

29. Select the symbol for sodium.
    A. Ca
    B. S
    C. H
    D. Cu
    E. Si
    F. Na

30. Select the symbol for nitrogen.
    A. Ni
    B. N
    C. H
    D. Nb
    E. No
    F. Na

31. Select the symbol for manganese.
    A. Ca
    B. Mg
    C. H
    D. Mn
    E. M
    F. Mo

32. Select the symbol for hydrogen.
    A. Hy
    B. N
    C. H
    D. Cu
    E. He
    F. Hi

33. Select the symbol for cobalt.
    A. Ca
    B. Cs
    C. C
    D. Cu
    E. Co
    F. Na

34. Select the symbol for calcium.
    A. Ca
    B. C
    C. H
    D. Cu
    E. Co
    F. Cm

35. What is the name of the element with the symbol Au?
    A. gold
    B. lead
    C. tin
    D. phosphorus
    E. silver
    F. arsenic

36. What is the name of the element with the symbol P?
    A. gold
    B. lead
    C. tin
    D. phosphorus
    E. potassium
    F. arsenic

37. What is the name of the element with the symbol Sn?
    A. gold
    B. lead
    C. tin
    D. phosphorus
    E. fluorine
    F. arsenic

38. What is the name of the element with the symbol As?
    A. gold
    B. lead
    C. tin
    D. argon
    E. fluorine
    F. arsenic

39. What is the name of the element with the symbol Pb?
    A. gold
    B. lead
    C. tin
    D. phosphorus
    E. fluorine
    F. arsenic

40. What is the name of the element with the symbol F?
    A. gold
    B. lead
    C. tin
    D. iron
    E. fluorine
    F. arsenic

41. The elements in $NiCl_2$ are nitrogen, iodine, and chlorine.
    True False

42. The elements in a given periodic group have similar properties.
    True False

43. How many classical groups are there in the periodic table?
    A. 7
    B. 16
    C. 22
    D. some other number

44. How many periods are there in the periodic table?
    A. 3
    B. 5
    C. 7
    D. 16

45. The last alkali metal is
    A. Rb.
    B. Cu.
    C. Fr.
    D. Ar.
    E. As.

46. The last nonmetal in third period of the periodic table is
    A. Rb.
    B. Cu.
    C. Fr.
    D. Ar.
    E. As.

47. The first element in the fifth period of periodic table is
    A. Rb.
    B. Cu.
    C. Fr.
    D. Ar.
    E. As.

48. The last nonmetal in group VA of periodic table is
    A. Rb.
    B. Cu.
    C. Fr.
    D. Ar.
    E. As.

49. The first coinage metal is
    A. Rb.
    B. Cu.
    C. Fr.
    D. Ar.
    E. As.

50. How many elements are there in the first series of transition elements?
    A. 5
    B. 7
    C. 8
    D. 10
    E. 14

51. How many elements (other than the artificial elements) are there in group VA of the periodic table?
    A. 3
    B. 5
    C. 8
    D. 10
    E. 14

52. How many elements (other than the artificial elements) are there in group VB of the periodic table?
    A. 3
    B. 5
    C. 8
    D. 10
    E. 14

53. Which of the following elements is most similar in chemical properties to nitrogen?
    A. C
    B. O
    C. S
    D. P

54. A theory is an explanation of a law that has been accepted as true by the scientific community, whereas a law is a summary of many observations.
    True False

1 Key

1. Ammonia is a compound of nitrogen and hydrogen only. A certain gaseous combination of nitrogen and hydrogen looks uniform throughout and has no smell. The combination is a(n)
A. element.
B. compound.
C. heterogeneous mixture.
D. homogeneous mixture.

Goldberg - 001 Chapter... #1

2. A certain combination of hydrogen and oxygen gases has a definite composition and is liquid under ordinary conditions in a room, but is **not** water. The combination is a(n)
A. element.
B. compound.
C. heterogeneous mixture.
D. homogeneous mixture.

Goldberg - 001 Chapter... #2

3. A solid sample of a pure substance was heated in the open atmosphere, and a silver-colored solid resulted that weighed 23% less than the original sample. Reheating produced no further change. Classify the sample as a(n)
A. element.
B. compound.
C. heterogeneous mixture.
D. homogeneous mixture.

Goldberg - 001 Chapter... #3

4. A certain sample of a pure liquid substance was heated in the open atmosphere, and a solid weighing 21% more than the original sample resulted. Classify the solid as a(n)
A. element.
B. compound.
C. heterogeneous mixture.
D. homogeneous mixture.

Goldberg - 001 Chapter... #4

5. When a certain sample of a substance is heated in air, it gains 5.90% in mass. The product is brown with gray areas in it. Classify the product as a(n)
A. element.
B. compound.
C. heterogeneous mixture.
D. homogeneous mixture.

Goldberg - 001 Chapter... #5

6. Which one of the following properties is **not** intensive?
A. density
B. boiling point
C. color
D. volume

Goldberg - 001 Chapter... #6

7. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is homogeneous.
TRUE

Goldberg - 001 Chapter... #7

8. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is heterogeneous.
FALSE

Goldberg - 001 Chapter... #8

9. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is a compound?
TRUE

Goldberg - 001 Chapter... #9

10. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance is an element?
FALSE

Goldberg - 001 Chapter... #10

11. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance has a mass greater than that of the liquid.
TRUE

Goldberg - 001 Chapter... #11

12. A solid, black substance is heated in the absence of air, producing a colorless gas and a silvery liquid. The substance has a mass equal to that of the gas plus the liquid.
TRUE

Goldberg - 001 Chapter... #12

13. How many elements are present in Si?
A. 1
B. 2
C. 3
D. 4

Goldberg - 001 Chapter... #13

14. How many elements are present in SI_2?
A. 1
B. 2
C. 3
D. 4

Goldberg - 001 Chapter... #14

15. How many elements are present in NH_4NO_3?
A. 1
B. 2
C. 3
D. 4
E. 9

Goldberg - 001 Chapter... #15

16. How many elements are present in $NoCl_2$?
A. 1
B. 2
C. 3
D. 4

Goldberg - 001 Chapter... #16

17. How many elements are present in NOCl?
A. 1
B. 2
C. 3
D. 4

Goldberg - 001 Chapter... #17

18. How many elements are present in He?
A. 1
B. 2
C. 3
D. 4

Goldberg - 001 Chapter... #18

19. How many elements are present in $Co_2(CO)_9$?
A. 1
B. 2
C. 3
D. 4
E. more than 4

Goldberg - 001 Chapter... #19

20. How many elements are present in CH_3CH_2OH?
A. 1
B. 2
C. 3
D. 4
E. more than 4

Goldberg - 001 Chapter... #20

21. P is the symbol for
A. phosphorus.
B. bromine.
C. calcium.
D. gold.
E. potassium.
F. carbon.

Goldberg - 001 Chapter... #21

22. Au is the symbol for
A. phosphorus.
B. bromine.
C. calcium.
D. gold.
E. oxygen.
F. silver.

Goldberg - 001 Chapter... #22

23. C is the symbol for
A. cobalt.
B. cesium.
C. calcium.
D. gold.
E. chromium.
F. carbon.

Goldberg - 001 Chapter... #23

24. Br is the symbol for
A. phosphorus.
B. bromine.
C. calcium.
D. gold.
E. oxygen.
F. boron.

Goldberg - 001 Chapter... #24

25. O is the symbol for
A. phosphorus.
B. bromine.
C. calcium.
D. gold.
E. oxygen.
F. carbon.

Goldberg - 001 Chapter... #25

26. Ca is the symbol for
A. cerium.
B. cobalt.
C. calcium.
D. gold.
E. oxygen.
F. carbon.

Goldberg - 001 Chapter... #26

27. Select the symbol for potassium.
A. Ca
B. K
C. Mn
D. P
E. Po
F. Na

Goldberg - 001 Chapter... #27

28. Select the symbol for copper.
A. Ca
B. K
C. Cs
D. Cu
E. Co
F. C

Goldberg - 001 Chapter... #28

29. Select the symbol for sodium.
A. Ca
B. S
C. H
D. Cu
E. Si
F. Na

Goldberg - 001 Chapter... #29

30. Select the symbol for nitrogen.
A. Ni
B. N
C. H
D. Nb
E. No
F. Na

Goldberg - 001 Chapter... #30

31. Select the symbol for manganese.
A. Ca
B. Mg
C. H
D. Mn
E. M
F. Mo

Goldberg - 001 Chapter... #31

32. Select the symbol for hydrogen.
A. Hy
B. N
C. H
D. Cu
E. He
F. Hi

Goldberg - 001 Chapter... #32

33. Select the symbol for cobalt.
A. Ca
B. Cs
C. C
D. Cu
E. Co
F. Na

Goldberg - 001 Chapter... #33

34. Select the symbol for calcium.
A. Ca
B. C
C. H
D. Cu
E. Co
F. Cm

Goldberg - 001 Chapter... #34

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A. gold
B. lead
C. tin
D. phosphorus
E. silver
F. arsenic

Goldberg - 001 Chapter... #35

36. What is the name of the element with the symbol P?
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C. tin
D. phosphorus
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F. arsenic

Goldberg - 001 Chapter... #36

37. What is the name of the element with the symbol Sn?
A. gold
B. lead
C. tin
D. phosphorus
E. fluorine
F. arsenic

Goldberg - 001 Chapter... #37

38. What is the name of the element with the symbol As?
A. gold
B. lead
C. tin
D. argon
E. fluorine
F. arsenic

Goldberg - 001 Chapter... #38

39. What is the name of the element with the symbol Pb?
A. gold
B. lead
C. tin
D. phosphorus
E. fluorine
F. arsenic

Goldberg - 001 Chapter... #39

40. What is the name of the element with the symbol F?
A. gold
B. lead
C. tin
D. iron
E. fluorine
F. arsenic

Goldberg - 001 Chapter... #40

41. The elements in $NiCl_2$ are nitrogen, iodine, and chlorine.
FALSE

Goldberg - 001 Chapter... #41

42. The elements in a given periodic group have similar properties.
TRUE

Goldberg - 001 Chapter... #42

43. How many classical groups are there in the periodic table?
A. 7
B. 16
C. 22
D. some other number

Goldberg - 001 Chapter... #43

44. How many periods are there in the periodic table?
A. 3
B. 5
C. 7
D. 16

Goldberg - 001 Chapter... #44

45. The last alkali metal is
A. Rb.
B. Cu.
C. Fr.
D. Ar.
E. As.

Goldberg - 001 Chapter... #45

46. The last nonmetal in third period of the periodic table is
A. Rb.
B. Cu.
C. Fr.
D. Ar.
E. As.

Goldberg - 001 Chapter... #46

47. The first element in the fifth period of periodic table is
A. Rb.
B. Cu.
C. Fr.
D. Ar.
E. As.

Goldberg - 001 Chapter... #47

48. The last nonmetal in group VA of periodic table is
A. Rb.
B. Cu.
C. Fr.
D. Ar.
E. As.

Goldberg - 001 Chapter... #48

49. The first coinage metal is
A. Rb.
B. Cu.
C. Fr.
D. Ar.
E. As.

Goldberg - 001 Chapter... #49

50. How many elements are there in the first series of transition elements?
A. 5
B. 7
C. 8
D. 10
E. 14

Goldberg - 001 Chapter... #50

51. How many elements (other than the artificial elements) are there in group VA of the periodic table?

A. 3
B. 5
C. 8
D. 10
E. 14

Goldberg - 001 Chapter... #51

52. How many elements (other than the artificial elements) are there in group VB of the periodic table?

A. 3
B. 5
C. 8
D. 10
E. 14

Goldberg - 001 Chapter... #52

53. Which of the following elements is most similar in chemical properties to nitrogen?
A. C
B. O
C. S
D. P

Goldberg - 001 Chapter... #53

54. A theory is an explanation of a law that has been accepted as true by the scientific community, whereas a law is a summary of many observations.
TRUE

Goldberg - 001 Chapter... #54

1 Summary

Category	*# of Questions*
Goldberg - 001 Chapter...	54