Name:_____ Grade/Group:____
Subject: Chemistry-7 Teacher: Mrs. Raj
Date: _____

Test 3: Lab Safety, Measurements, Matter and Periodic Table

Directions: Determine the best answer for each question. Circle your answer on this test packet and bubble your answer heavy and dark on the bubble sheet.

1. The electron configuration of Calcium's (Ca) valence electrons is
   a. $1s^2$
   b. $2s^2$
   c. $3s^2$
   d. $4s^2$

2. The subatomic particle with a negative electric charge is the
   a. proton
   b. neutron
   c. electron
   d. nucleus

3. Which element has the following electron configuration: $1s^2 2s^2 2p^1$
   a. N
   b. F
   c. B
   d. C

4. An atom of Ne contains 10 electrons. How many energy levels are needed to contain these electrons?
   a. 4
   b. 3
   c. 2
   d. 1

5. The correct number of subatomic particles for $^{51}_{23}V$ is

Answer choices	Electrons	Protons
a)	28	28
b)	22	22
c)	23	28
d)	23	23

6. Which of the following is a compound?
   a. Sea water
   b. Calcium carbonate
   c. Sugar water
   d. Calcium

7. Which of the following is a mixture?
   a. Water
   b. NaCl (aq)
   c. H_2
   d. Sodium

8. The correct electron configuration for Cl is
   a. $1s^1 2s^2 2p^6 3s^2 3p^3$
   b. $1s^2 2s^2 2p^6 3s^2 3p^4$
   c. $1s^2 2s^2 2p^6 3s^2 3p^5$
   d. $1s^2 2s^2 2p^6 3s^2 3p^6$

9. Choose the property from the list that is a chemical property.
   a. Miscibility
   b. Odor
   c. Volume
   d. Reactivity

10. How many significant figures are in the value, 2100 g?
   a. 2
   b. 3
   c. 4
   d. infinite

11. The outer energy level of lithium contains
   a. 1 electron
   b. 2 electrons
   c. 3 electrons
   d. 4 electrons

12. The atomic number of bromine is 35. How many electrons does neutral bromine have?
   a. 35
   b. 79.9
   c. 36
   d. 7

13. If the atomic number of a <u>neutral</u> element is 20; there are
   a. 20 protons and 24 electrons
   b. 20 protons and 21 electrons
   c. 23 protons and 23 electrons
   d. 20 protons and 20 electrons

14. The Cs atom has
   a. 55 protons and 56 electrons
   b. 56 protons and 55 electrons
   c. 55 protons and 55 electrons
   d. 57 protons and 55 electrons

15. Group 8A on the periodic table is also called the
   a. Halogens
   b. Noble gases
   c. Lanthanides
   d. Alkali metals

16. An experiment is conducted to relate the level of chemical reactivity between Na and Ca. The two metals are combined with water and the level of reactivity analyzed. As a result of this experiment the student correctly concluded:
   a. Group 1A metals are more reactive than Group 2A
   b. Group 2A metals are more reactive than Group 1A
   c. Group 1A and 2A have equal reactivity
   d. Group 1A and 2A are completely unreactive

17. Group 1A metals are called the alkali metals because
    a. They form acidic solutions when reacted with water
    b. They form basic solutions when reacted with water
    c. They form neutral solutions when reacted with water
    d. They are unreactive with water

18. The number of core electrons in sodium (Na) are
    a. 2
    b. 6
    c. 8
    d. 10

19. The number of core electrons in potassium (K) is
    a. 20
    b. 18
    c. 10
    d. 8

20. Which substance would have a definite volume and a definite shape?
    a. Oxygen gas
    b. Liquid water
    c. Iron metal
    d. none of these

21. When elements form mixtures, the elements
    a. Keep their original properties
    b. React to form new substances with new properties
    c. Combine in a specific mass ratio
    d. Always change their physical state

22. _____ can be separated by physical means.
    a. Atoms
    b. Compounds
    c. Elements
    d. Mixtures

23. Which of the following is the chemical property of iodine?
    a. Iodine is a purple solid
    b. Iodine reacts with sodium metal to form sodium iodide
    c. The density of iodine is 4.93 g/cm^3
    d. Iodine does not conduct electricity

24. Columns on the periodic table are called:
    a. Periods
    b. Rows
    c. Groups
    d. Energies

25. Group 7A on the periodic table is more commonly called
    a. Alkali Metals
    b. Alkaline Earth Metals
    c. Halogens
    d. Transition Metals

26. K, Ca, and Se appear in period number

a. 3
b. 4
c. 5
d. 6

27. B, Al, and Ga appear in group

a. 1A
b. 3A
c. 7A
d. 5A

28. The atomic number of neutral Gallium is 31. Gallium has

a. 30 protons
b. 31 protons
c. 32 protons
d. 33 protons

29. A characteristic of a metal is

a. Shiny appearance
b. Gas at room temperature
c. Poor conductor of heat or electricity
d. Not malleable

30. The elements on the modern periodic table are arranged according to

a. Color
b. Shape
c. Atomic mass
d. Atomic number

31. Atoms of which elements would have the same number of valence electrons?

a. Elements of the same color
b. Elements in the same period
c. Elements in the same group
d. Elements with the same atomic mass

32. Which element is in the same group as Beryllium (Be)?

a. Carbon
b. Strontium
c. Phosphorus
d. Sodium

33. Elements in the "B" groups are called

a. Lanthanides
b. Alkaline earth metals
c. Transition metals
d. Halogens

34. Properties of which two elements would be the most similar?

a. H and He
b. O and P
c. K and Kr
d. Mg and Ba

35. O, N, S, and P are

a. Nonmetals
b. Metals
c. Metalloids
d. None of the above

36. K, Cu, Ca, and Zn are

a. Nonmetals
b. Metals
c. Metalloids
d. None of the above

37. Which of the following elements have 8 valence electrons?

a. Fr
b. Fe
c. Ar
d. Br

38. Li, Be, B, and C are in the same

a. Period
b. Group
c. Metal category
d. None of the above

39. A property of Bromine is

a. Unreactive
b. Shiny
c. Ductile
d. 7 valence electrons

40. A property of the Noble gases is

a. Unstable
b. Produces color when introduced to electric current
c. Solid at room temperature
d. Easily ionizes