1. What is an element? _____________________________________________________
2. What is an atom? _____________________________________________________
3. A compound consists of two or more different ____________ bonded together.
   Give some examples of a compound. ______________________________________
4. What are the subatomic particles of an atom? ______________________________
   Which ones are found in the nucleus? ______________________________________
5. What is the charge of a proton? _________
   What is the charge of a neutron? _________
   What is the charge of an electron? _______
6. An atom has a ______________ charge because the number of _______ equals number of
   __________________.
7. What is the atomic number? _____________________________________________
8. What is the atomic weight? _____________________________________________
9. What are isotopes? ____________________________________________________
   How are they different? _________________________________________________
   What are radioactive isotopes? __________________________________________
10. What do the rows on a periodic table tell you about the elements?
    _____________________________________________________________________
    What do the columns tell you?
    _____________________________________________________________________
11. How are the inert gases (last column) different from the other elements? ________
    _____________________________________________________________________
12. Which nutrients (carbohydrates, proteins, lipids/fats) can be made from the elements CHO?
    _____________________________________________________________________
13. Which nutrients (carbohydrates, proteins, lipids/fats) can be made from the elements CHON?
    _____________________________________________________________________
14. The ending "ose" indicates what type of nutrient? _____________________________
    Give some examples____________________________________________________
15. An atom that becomes charged because it loses or gains electron(s) is called an ________.
    An atom that loses an electron(s) and becomes positive is a ____________________.
    An atom that gains an electron(s) and becomes negative is called an ________________.
16. What type of bond is formed when atoms gain or lose electrons? ________________
    Give an example of a compound formed by this bond. _________________________
17. What are electrolytes? ___________________________________________________
18. What type of bond is formed when atoms share electrons? _________________________
    Give some examples of compounds formed by this bond. ___________________________
19. What type of covalent bond is formed when electrons are shared equally? ___________
    Give an example. __________________
20. What type of bond is formed when electrons are shared unequally? _________________
    Give an example.___________________
21. What type of charge is on the atoms that are formed by polar covalent bonds?
    ________________________________________________________________________
1. A substance that cannot be broken down to another substance by normal chemical reactions.

2. The smallest unit of matter that retains the properties of an element.

3. elements; CO₂, H₂O, C₆H₁₂O₆

4. Subatomic particles - protons, neutrons, electrons; those in nucleus - protons and neutrons

5. proton - positive; neutron - neutral; electron - negative

6. neutral; protons = electrons

7. number of protons

8. total mass of the atom; the weight of the protons and neutrons

9. Isotopes - different atomic forms of an element;
   have same number of protons, but different number of neutrons;
   isotopes that decay spontaneously and give off energy in the form of subatomic particles

10. Rows - number of protons (and electrons, because atoms are neutral)
    Columns - elements have similar characteristics (during reactions) because they have a similar
        number of electrons in the valence shell

11. Valence shell is completely filled with electrons. They do not react with other elements.

12. carbohydrates and fats

13. proteins

14. some carbohydrates (glucose, sucrose, cellulose)

15. ion; cation; anion

16. ionic; NaCl (Na⁺ + Cl⁻ → NaCl)

17. A substance that when dissolved in water dissociates to form charged ions.

18. covalent; H₂, O₂, CO₂

19. nonpolar covalent; CO₂

20. polar covalent; H₂O

21. partial positive and partial negative