Answers for Study Guide on PTE Test

1. Atom- Smallest unit of matter. Cannot be broken into smaller parts.
2. Electron- Negatively charged particle in an atom which “orbits” the nucleus in energy levels.
3. Proton- Positively charged particle found in the atom’s nucleus.
4. Neutron- Neutral particle found in the atom’s nucleus.
5. Molecule- Two or more atoms chemically combined. Smallest unit of a compound.
6. Compound- Substance made of two or more elements.
7. Valence Electron- Electron in the outermost (valence) shell (ring, energy level, orbital).
8. Valence Shell- Outermost ring (energy level, shell, orbital).
9. Lewis Dot Diagram- Element symbol surrounded by dots, representing valence electrons.
10. Bohr Model – Model showing protons & neutrons, surrounded by electron rings.
11. Symbol – Shortened version of the elements chemical name (ex. Cl for chlorine).
12. Metal- Left of zig-zag line. Solid, shiny, malleable, ductile, good conductors.
13. Nonmetal – Right of zig-zag line. Mostly gasses, dull, brittle, poor conductors.
14. Metalloid- On the zig-zag line. Share properties of both metals & non-metals.
15. Nucleus- Center of the atom including protons & neutrons. Total mass of the atom.
16. Atoms are unique because of the number of protons they each have.
17. The atomic number is based on the number of protons an atom has.
18. 6.941 amu
19. 39.95 amu
20. 107.9 amu
21. 4.003 amu
22. 12.01 amu
23. Elements in a specific group/column on the PTE have similar physical and chemical properties (such as reactivity) and have the same number of valence electrons
24. Oxygen, sulfur, selenium, and more are correct. Each has 6 valence electrons.
25. All elements in similar rows or periods have the same number of valence SHELLS.
26. Na, Mg, Al, Si, P, S, Cl, Ar. All have three SHELLS
27. Left side is generally most reactive.
28. Left side are metals
29. Right side
30. Boron, Silicon, Germanium, Arsenic, Antimony, Tellurium, Astatine
31. The majority of the elements are METALS.
32. H2O
33. NaCl
34. CO2
35. H2SO4
36. H2O is 18amu

NaCl is 58amu

CO2 is 44amu

H2SO4 is 98

1. The Noble Gases, group 8 (18) does not bond easily because they have a full shell of valence electrons.
2. No answer needed here.
3. Metal
4. Nonmetal
5. Nonmetal
6. Nonmetal
7. Nonmetal
8. Metal
9. Nonmetal
10. Metal
11. Metal
12. 1
13. 6
14. 5
15. 4
16. 8
17. 8
18. 2
19. 2
20. 4 (repeat)
21. NaO2 has the following ions [Na]+1 and [O] -2
22. K2S has the following ions [K]+1 and [S]-2
23. Sodium Chloride
24. Potassium Bromide
25. Calcium Chloride
26. Carbon Dioxide
27. water
28. Sulfuric Acid
29. Hydrogen monoxide (peroxide)