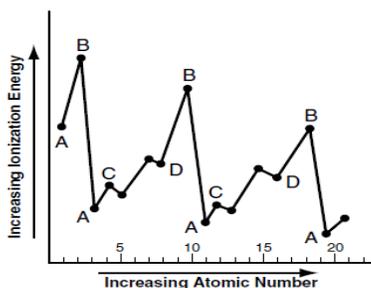


Part 2: Answer the questions below

13. How many electrons does Mg^{2+} have? _____
14. How many protons does N^{-3} have? _____
15. What will be the ion symbol (formula), if the ion has 19 protons and 18 electrons? _____
16. How many electrons does an ion have if it has 16 protons and a -2 charge? _____
17. If an ion has 53 protons and 54 electrons, what will be its charge? _____
18. Given the formula $\text{X}(\text{NO}_3)_3$, what is the charge on ion X? Be sure to include the sign (+ or -). _____

19. How many electrons does the Copper ion have in the ionic compound Cu_2SO_4 ? _____
20. Circle the atom *in each pair* that has the largest atomic radius.
 a) Al B b) Br Cl c) Na Al d) O F

21. Ionization energy is

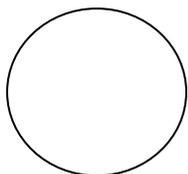


22. Which letter on the chart indicates the noble gases or the inert elements —

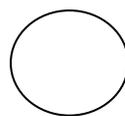
23. Circle the atom *in each pair* that has the greater ionization energy.
 a) Li Be b) Cl Si c) Ca Ba d) P Ar
24. Electronegativity is:
25. Circle the atom *in each pair* that has the greater electronegativity.
 a) Ca Ga b) Br As c) Ba Sr d) O S

26. Arrange the following in order of increasing ionic size.
 a. I^- , Br^- , Cl^-
 b. P^{3-} , S^{2-} , Cl^-
 c. Ba^{2+} , Sr^{2+} , Ca^{2+}

27. Label the atoms below as either Sodium or as Sodium Ion(Na^{1+}):

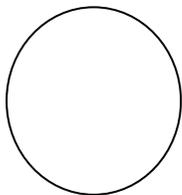


a. _____

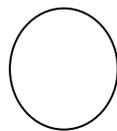


b. _____

28. Label the atoms below as either Oxygen or as Oxygen Ion(O^{2-}):



a. _____



b. _____

Part 3: Name the following:

29. P_2O_5

32. VO_2

30. $Zn(NO_3)_2$

33. PbS

31. IO_2

Part 4: Determine the formula for the following:

34. disilicon hexabromide

29. silver acetate

35. copper (I) phosphate

30. calcium sulfate

36. gallium oxide

Part 5: Draw the Lewis structure and determine the molecular geometry for each.

	Lewis structure		Lewis structure
37. PCl_3		39. BCl_3	
38. CCl_4		40. SCl_2	

Part 6: Determine if the following bonds are polar or nonpolar

41. H-O

42. N-Cl

43. P-Cl

