Chemistry Final Answers

1. B, D, C, A
2. 3,1,5,2,4
3. 5.6×10^{-3}
4. A nucleus surrounded by electrons
5. In the periodic table, the groups are the columns of elements.
6. Its chemical formula is MgCO3
7. Planck
8. Atomic mass
9. Positive
10. Moseley
11. Ionization energy
12. Ionic
13. Negative
14. Ammonia
15. ZnS
16. $Cl_2(g) + NaBr(aq) \longrightarrow 2\ NaCl(aq) + Br_2(l)$
17. $2\ LiOH(s) + CO_2(g) \longrightarrow Li_2CO_3(s) + H_2O(l)$
18. NO_2 $\quad 14.0\ g + 2(16.0\ g) = 46.0\ g \quad\quad 92.0 / 46.0 = 2$

    NO_2
    N_2O_4
19. $? \ mol\ Se = 45\ \cancel{g\ Se} \times \frac{1\ mol\ Se}{79.0\ \cancel{g\ Se}} = 0.57\ mol\ Se$
20. b. 3.74
21. b. 17.9
22. increases
23. 24.0 kPa - 1.7 kPa = 22.3 kPa
24. 3.47L
25. 31.3M
26. A measure of how much solute can dissolve in a given amount of solvent.
27. 80g
28. NaCl and KClO3
29. sulfurous acid
30. magnesium sulfate

31. $Q = m \times C \times \Delta t$

$Q = 25.0\ g \times 4.184\ J / g\ °C \times (-)25°C$

$Q = -2620\ J$

t is negative, so Q is negative as well.

32. $Q = m \times \Delta H_{fus}$

$Q = 25.0\ g \times 334\ J/g$

$Q = 8350\ J$

33. Protons and 2 Neutrons are lost.
34. Electron
35. b. right
36. a. increase
37. Alpha= least Beta= middle Gamma= mos
38. For alpha and beta decay it does because the proton number changes. During gamma, there is no change of identity, just energy
39. acid+base $\rightarrow$ salt+water
40. a. compound
41. C_2H_6 $2(12.0\ g) + 6(1.0\ g) = 30.0\ g$
42. b. covalent
43. a. Zn
44. a. Orbital