Objective:

This is to provide guiding questions to help you comprehend the material we have covered in this section of the class. These questions or very similar questions have been answered within the video lecture and/or live class.

Instructions and Notes:

- Most of these questions/concepts are taken or derived from the chapters in the Chemistry: Atoms First 2e Online Textbook (OpenStax)
- Book sections covered: 3.7, 4.3

Submission:

Students do not submit this and it is not graded.

Helpful Tips:

- These questions or very similar questions may appear on the exams so I strongly recommend that you complete them.
- Download the lectures and rewatch the lectures.
- Pause the lectures and rewind them through concepts you don't fully understand.
- Go to tutoring in the ASTC or MESA, ask your classmates in our Discord room, watch YouTube Videos, come to office hours, etc.

In-Lecture Questions

1. Write the name and formula of a polyatomic anion with a 2- charge. Does it have extra electrons or missing electrons compared to the neutral compound without a charge? How many?
2. What does fixed charged ion mean? What is a variably charged ion?
3. Ionic bonds occur between what two things?
4. In a neutral compound, the charges add up to what?
5. Write the formula for a compound containing calcium and fluoride
6. Write the formula for a compound containing magnesium and sulfate
7. Write the formula for a compound containing sodium and oxygen
8. Write the formula for a compound containing barium and nitrogen
9. Write the formula for a compound containing sodium and hydroxide
10. Write the formula for a compound containing ammonium and sulfur
11. Write the formula for a compound containing ammonium and carbonate

12. What is a molecular compound?
13. What is an ionic compound?
14. What is an acid?

Accompanying Questions

Topic 05: Polyatomic Ions and Nomenclature

15. What is a hydrate?
16. Are groups 3-12 on the periodic table mostly fixed charged ions or variably charged ions?
17. What two different charges do iron ions usually carry?
18. What is a prefix for the number 8?
19. Name the compound: N_2O_3
20. Name the compound: Cl_2O_7
21. Name the compound: P_4O_6
22. Write the formula: phosphorous pentachloride
23. Write the formula: iodine heptafluoride
24. Write the formula: carbon tetrachloride
25. Write the formula: dihydrogen monoxide

26. Write the name and formula of a polyatomic ion that ends in “ite”.
27. Write the name and formula of a polyatomic ion that ends in “ate”.
28. What is the name for this compound: Fe_2O_3
29. What is the name for this compound: FeO
30. What is the name for this compound: PbF_2
31. What is the name for this compound: PbF_4
32. What is the formula for this acid: sulfurous acid
33. What is the formula for this acid: phosphoric acid
34. What is the formula for this acid: nitrous acid
35. What is the formula for this acid: acetic acid
36. What is the name for this compound: $MgCl_2$
37. What is the name for this compound: $CuCl_2$
38. What is the name for this compound: $(NH_4)_2CO_3$
39. What is the formula for this compound: ammonium sulfate
40. What is the name for this compound: $NaHSO_4$
41. What is the name for this compound: $H_2Cr_2O_7$
42. What is the name for this compound (pay attention to the (g): HCl (g)