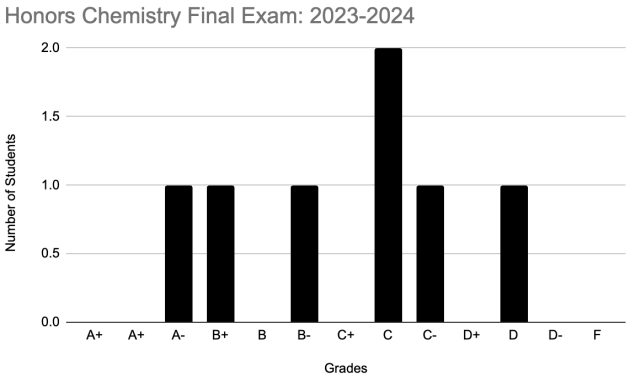
Name _____Date _____ Pd. _____

Honors Chemistry Final Exam Study Guide, 2023-2024



You may use the following for the final exam (~ questions)

- ❖ Periodic Table (supplied)
- ❖ Predicting Products Guide/Solubility Chart (supplied)
- ❖ VSEPR Graphic Organizer (supplied)
- ❖ Student-created, handwritten 3”x5” notecard
- ❖ Calculator
- ❖ Fully-charged laptop (Google Classroom/Forms)

Date and Time of Your Final:

Friday, May 31, 2024: Pd. 5
Monday, June 3, 2024: Pds. 1,3,7
Tuesday, June 4 2024: Pds. 2,4,6

Unit 6: Periodic Table and Trends

1. ☐Sections and properties on the periodic table: alkali metals, alkaline earth metals, transition metals, halogens, noble gases, lanthanides, actinides, metals, nonmetals, metalloids
2. ☐Periodic trends: atomic radius, electronegativity, 1st ionization energy, electron affinity, valence electrons, reactivity

Unit 7: Ionic Compounds and Chemical Quantities

3. ☐Ions: cations, anions, polyatomic ions
4. ☐Writing balanced ionic formulas
5. ☐Naming ionic compounds
6. ☐Hydrates: writing formulas, naming
7. ☐Lewis dot structures: electron transfer
8. ☐Hydrates: writing formulas, naming, % water
9. ☐The Mole and Avogadro’s number
10. ☐Atomic Inventory: counting atoms in a formula
11. ☐Molar mass
12. ☐Conversions between moles, mass, particles, and volume
13. ☐Percent composition
14. ☐Empirical formulas
15. ☐Molecular formulas

Unit 8: Covalent Bonding

16. ☐ Naming and writing chemical formulas for covalent compounds
17. ☐ Determining bond type by physical properties: covalent vs. ionic

18. ☐ Determining bond type by electronegativity difference: nonpolar, polar, ionic
19. ☐ Solubility rule: likes dissolve likes
20. ☐ Lewis dot structures: valence electrons, octet rule, formal charge
21. ☐ VSEPR Model: domain formula, shape, bond angles
22. ☐ Polarity of a molecule: polar vs. nonpolar
23. ☐ Types and strengths of intermolecular forces: hydrogen-bonding, dipole-dipole, London dispersion

Unit 9: Chemical Equations

24. ☐ Law of conservation of matter
25. ☐ Balancing equations
26. ☐ Indicating states of matter
27. ☐ 5 reaction types: synthesis, decomposition, single replacement, double replacement, combustion
28. ☐ Predicting products

Unit 10: Stoichiometry

29. ☐ Converting between moles, mass, particles, and volume
30. ☐ Limiting reactant
31. ☐ % yield

Unit 11: Gases

32. ☐ Pressure and pressure conversions
33. ☐ Kinetic molecular theory
34. ☐ Manometers and barometers
35. ☐ Boyle's law
36. ☐ Charles' law
37. ☐ Combined Gas Law
38. ☐ Ideal Gas Law
39. ☐ Dalton's Law of Partial Pressures
40. ☐ Graphing relationships: direct, inverse, linear, nonlinear
41. ☐ Gas collection over water

Don't forget, there is space devoted to each unit on Google Sites. If you need extra practice on a certain topic (or you need an extra unit packet), go to Google Sites and print a copy of that particular page. You should already have the answers in your unit packet or there should be an answer key on Google Sites. If you don't see something you are looking for, let me know and I can post it.

Good luck,

Mr. B.