

CH301 Fall 2008 Exam 1 question types

1. electromagnetic radiation theory and calculation
2. classical theory falls apart (blackbodies, photoelectric effect and atomic emission)
3. Rydberg equation calculation
4. particle in a box theory
5. uncertainty principle theory and calculation
6. deBroglie equation theory and calculation
7. Schrodinger and wave equations: theory
8. applying quantum number rules
9. applying quantum number rules
10. applying Aufbau, Pauli and Hund
11. assigning electronic configurations of atoms and ions
12. assigning electronic configurations of atoms and ions (exceptions)
13. assigning electronic configurations of atoms and ions (exceptions)
14. periodic table nomenclature
15. theory of periodic trends: ENC explains IE, EA, AR, IR, metals
16. ranking periodic trends: IE, EA, AR, IR, metals
17. ranking periodic trends: IE, EA, AR, IR, metals (exceptions)
18. Lewis structures of ionic compounds
19. Lewis structures of covalent compounds, resonance
20. Lewis structures of covalent compounds, multiple central atoms
21. Lewis structures of covalent compounds (exceptions to octet, too odd)
22. Lewis structures of covalent compounds (exceptions to octet, too small)
23. Lewis structures of covalent compounds, multiple bonds
24. Lewis structures of covalent compounds (exceptions to octet, too large)
25. Lewis structures of covalent compounds (exceptions to octet, too large)
26. ranking crystal lattice energy
27. electronegativity calculation and ranking
28. assigning formal charge
29. formal charge and correct Lewis structures
30. ranking bonding trends: EN, bond energy, bond length