

Chemistry suggestion paper - Atomic Structure

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1. Explain Iotope, Isoton, Isobar with example.
2. Describe Ratherford's atom model and it's limitation.
3. Describe Bhor's atom model and it's limitation.
4. Explain the dual nature of an electron.
5. Derive De-Broglie's equation.
6. How does Bhor explains Hydrogen spectrum.
7. Calculate the wave length in \AA of the line of 'Blamer series' that is associated with drop of an electron from 4th orbit. ($R = 109676\text{cm}^{-1}$)
8. Calculate the Rydberg constant.
9. Explain the Quantum numbers n, l, m, s .
10. Explain these laws with example:
 - Aufbau's principal
 - Hund's principal
 - Pauli's principal
11. Give definitions of these terms below
 - Ionization energy/potential
 - Electron affinity
 - Electro negativity
12. Describe Heisenberg's uncertainty principle
13. Derive Schrodinger's wave equation in *three dimentional* space.