



# UNIT 2 – ATOMIC STRUCTURE

IPOD Questions



# IT'S *THE* PROBLEM OF *THE* DAY

IPOD # 7

Complete the following chart:

<u>Name</u>	<u>Symbol</u>	<u>Shorthand Notation</u>	<u>Atomic Notation</u>	<u>Atomic #</u>	<u>Mass #</u>	<u>Protons</u>	<u>Neutrons</u>	<u>Electrons</u>
			${}_{29}^{63}\text{Cu}$					
				80				
							24	21
		Bromine-80						

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## IPOD # 8

If element X consists of 78.7% of atoms with a mass of 24.0 amu, 10.1% of atoms with a mass of 25.0 amu, and 11.2% of atoms with a mass of 26.0 amu, what is the average atomic mass of element X?



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## IPOD # 9

Write electron configurations & orbital notation for the following elements:

a) P

b) Ni

c) Ce



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## IPOD # 10

Write electron configurations & orbital notation for the following elements:

a) Cr

b) Pb

c) Sb





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IPOD # 12

**Apply trends of the periodic table to the following:**

- a) Which element has the larger atomic radius, Carbon or Lead?
- b) Which element has the greater first ionization energy, Strontium or Iodine?
- c) Which particle has the larger radius, Fe or Fe<sup>3+</sup>?
- d) Which element has the lower electronegativity, Phosphorus or Sodium?
- e) Arrange the following in order of increasing ionization energy: Silver, Iodine, Zirconium, Strontium.

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## IPOD # 13

For each description below, list an ELEMENT that fits the description:

- a) Alkali element in period 5.
- b)  $-2$  ion from period 3.
- c) Metal from group 4A.
- d) Metalloid from Group 4A.
- e) Period 2 element with 2 valence electrons.
- f) Halogen that is a liquid at room temperature.

