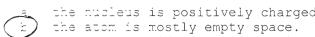
	CHM151 Quiz 2 25 Pts Fall 2005 NAME: Key
î.	In the Rutherford gold foil experiment, the fact that most of the alpha particles were not
	deflected as they passed through the gold foil indicates that
	the nucleus is positively charged. The atom is mostly empty space.



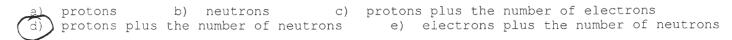
atoms are solid spheres touching each other in the solid state.

- gold is very dense.
- e) none of the above is correct.

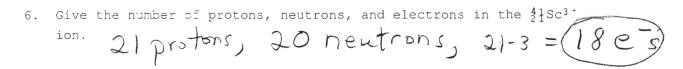
2	Which	of	the	fol	lowing	particl	es h	ias th	e smal	lest	mass?

1						
(a)	an electron	b)	а	proton		c) a neutron
(a)	an electron a hydrogen atom			e)	а	hydrogen nucleus

3	The	mass	number	of	an	atom	is	the	number	$\circ f$	in	the	atom
٥.	THE	Illass	number	OI	all	acom	TS	CHE	Humber	OI	T 11	CIIC	acom



- 4. Isotopes are atoms of the same element that
 - a) have different numbers of electrons.
 - b) have different numbers of protons.
 - have different atomic numbers. d) have different numbers of neutrons. e) have different nuclear charges.
- 5. The atomic number of certain element is 19, and its atomic weight is 39. An atom of the element contains protons, neutrons, and the chemical symbol for the element is



- sizer the $^3_1 \hat{7}$ Cl isotope. An atom of this isotope contains __neutrons.
- 8. A hypothetical element consists of the following naturally occurring isotopes. What is the atomic weight of the element? 0-11

Isotopes 2 3	Mass 46.041 amu 47.038 amu 49.034 amu	Abundance 26.00% 58.00% 16.00%	$46.041 \times 0.2600 = 11.97066$ $47.038 \times 0.5800 = 27.28204$ $49.034 \times 0.1600 = 7.84544$
			47.09814

47.10)