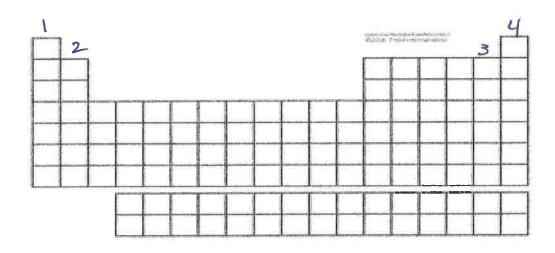
CHEM1301/Exam 2/Dooley Sept 30, 2013

- - A) ancient Greek philosopher who proposed that matter was continuous
 - B) created the modern periodic table
 - C) proposed the modern Atomic Theory
 - D) discovered the existence of electrons
 - E) none of the above
- **E**_2. Which of the following statements about the nature of electrical charge is FALSE?
 - A) Electrical charge is a fundamental property of protons and electrons.
 - B) Positive and negative electrical charges attract each other.
 - C) Positive-positive or negative-negative charges repel each other.
 - D) Positive and negative charges cancel each other so that a proton and electron, when paired, are charge neutral.
 - E) All of the above statements are true.
- 3. Nonmetals are located where on the periodic table?
 - A) left side
 - B) right side
 - C) middle
 - D) zig-zag diagonal line
 - E) none of the above
- _____4. Transition metals are located where on the periodic table?
 - A) left side
 - B) right side
 - C) middle
 - D) zig-zag diagonal line
 - E) none of the above
 - 5. Kr is a member of which family?
 - A) noble gases
 - B) halogens
 - C) alkaline earth metals
 - D) alkali metals
 - E) none of the above

D ₆ .	All of the following statements about different elements are true EXCEPT: A) Barium is an alkaline earth metal. B) Manganese is a transition metal. C) Germanium is considered a metalloid. Potassium is one of the noble gases. E) Iodine is a halogen.
<u>A</u> _7.	Isotopes are: A) atoms of the same element that have different number of neutrons. B) atoms of the same element that have different number of protons. C) atoms of the same element that have different number of electrons. D) atoms of the same element that have the same number of neutrons. E) none of the above
<u>B</u> 8.	A specific isotope of an element is known to have 15 protons and 16 neutrons. Which symbol would properly represent this isotope? A) $^{15}_{31}$ Ga B) $^{31}_{15}$ P C) $^{16}_{15}$ X D) $^{31}_{16}$ S E) none of the above
<u>B</u> 9.	How many oxygen atoms are in the formula Al ₂ (CO ₃) ₃ ? A) 3 B) 9 C) 1 D) 6 E) none of the above
<u></u>	Which metal atom below would NOT be involved in formation of a Type II ionic compound? A) Na B) Mn C) Fe D) Cr E) none of the above

Atomic Mass Calculation (10 Points). No credit for answers with work I can't follow. Calculate the atomic mass of Lithium if 7.42% exists as Li-6 with a mass of 6.015 amu and 92.58% exists as Li-7 with a mass of 7.016 amu?

Referring to the blank periodic table below, provide the names (2 Points) and the common charges (2 Points) for each of the families marked:



Column	Family Name	Common Charge		
1	Alkali Metal	+1		
2	Alkali Earth Metal	+2		
3	Halogen			
4	Noble Gas	Ø		

Fill in the table below (15 Points):

Symbol (with charge)	Number of Protons	Number of neutrons	Number of electrons	Atomic Number (Z)	Mass Number (A)	Atomic Mass (amu)	Charge
F	9	9	10	9	18	19.00	-1
P+5+	78	79	73	78	157	195.08	+5
Ca ²⁺	20	23	18	20	, 43	40.08	+2

Naming Compounds and Molecules (30 Pts Total)

11-20 Identify the compound as either Molecular, Ionic Type 1, or Ionic Type 2. (1 Pt)

21-30 Write the name/formula for the listed compounds. (2 Pts)

	11-20: Identify Type	21-30: Name/Formula
Potassium acetate	Ionic Type 1	KCzH3Oz
phosphorous pentachloride	Molecular	PC15
manganese (II) phosphate	Foric Type 2	Mn3 (P04)2
Fe ₂ O ₅	Ionic Type 2	iron (I) oxide
diphosphorus pentoxide	Molecular	P205
SiCl ₄	Molecular	silicon tetrachlorida
Mg(NO ₂) ₂	Jonic Type 1	magnesium nitrite
Lead (IV) iodide	Jonic Type2	Pb I4
TiO ₂	Jonic Type 2	titanium (III) oxide
RbOH	Fonic Type 1	rubidium hydroxide

Table Legy

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