

Fall 2016 Final Exam Practice Problems - CHUNK #2 - Topics 9-16		
Topic #	Q #	Question
9	1	Convert 3.5 mi into cm
	2	Convert 4 mi/hr into m/s
	3	Convert 19.2 mi/min into m/hr
	4	Convert 52 m/s into mi/hr
10	5	Convert 20g of Ca(OH) ₂ into moles.
	6	Convert 15g of K ₂ SO ₄ into moles.
	7	Convert 54 moles of (NH ₄) ₂ S into grams.
	8	Convert 0.056 moles of Ag into grams.
	9	Convert 16 moles of H ₂ SO ₄ into molecules.
	10	Convert 2.5x10 ³¹ molecules of H ₂ SO ₄ into moles
11	11	What is an electron orbital?
	12	Sketch pictures of an “s” orbital and a “p” orbital.
	13	How many electrons can an orbital hold?
	14	How many electrons can a set of s orbitals hold? A set of p orbitals? A set of d orbitals? A set of f orbitals?
12	15	Sketch what the orbital diagram should look like for sulfur. (Mrs Farmer will show you how to sketch one out easily)
	16	Sketch what the orbital diagram should look like for Mn
	17	Write a short paragraph explaining how to fill an orbital diagram.
13	18	What element is represented by the e- configuration of: 1s ² 2s ² 2p ⁶ 3s ² 3p ⁶ 4s ² 3d ¹⁰ 4p ² ?
	19	What element is represented by the electron configuration of: 1s ² 2s ² 2p ⁶ 3s ² 3p ⁶ 4s ¹
	20	Write the electron configuration for phosphorus
	21	Write the electron configuration for silver
14	22	Draw a picture of what happens during atomic absorption. Write 3 sentences describing what happens.
	23	Draw a picture of what happens during atomic emission. Write 3 sentences describing what happens.
	24	What does ground state mean? Excited state?
15	25	List the three main types of radiation, what their symbols are (including the little numbers on top and bottom of the symbol), and what stops them.
	26	Which type of radiation is pure energy? Which type is a high energy electron? Which type is a helium nucleus?
	27	What is the charge on the three main types of radiation & what type of charge would they be attracted to?
16	28	Finish the following nuclear equation: ⁹⁹ ₄₃ Tc → _____ + ⁰ ₋₁ e
	29	Finish the following nuclear equation: ²³⁸ ₉₂ U → ²³⁴ ₉₀ Th + _____
	30	Write the nuclear equation for Samarium undergoing beta emission

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