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| Fall Final Exam Practice Problems - CHUNK #2 – Topics 8-15 |
| Topic # | Q # | Question |
| **8** | 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 |
| **9** | 5 | Convert 20g of Ca(OH)2 into moles.  |
| 6 | Convert 15g of K2SO4 into moles. |
| 7 | Convert 54 moles of (NH4)2S into grams.  |
| 8 | Convert 0.056 moles of Ag into grams.  |
| 9 | Convert 16 moles of H2SO4 into molecules.  |
| 10 | Convert 2.5x1031 molecules of H2SO4 into moles |
| **10** | 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? |
| **11** | 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.  |
| **12** | 18 | What element is represented by the e- configuration of: 1s22s22p63s23p64s23d104p2 ? |
| 19 | What element is represented by the electron configuration of: 1s22s22p63s23p64s1 |
| 20 | Write the electron configuration for phosphorus |
| 21 | Write the electron configuration for silver |
| **13** | 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? |
| **14** | 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? |
| **15** | 28 | Finish the following nuclear equation: 9943Tc → \_\_\_\_\_ + 0-1e |
| 29 | Finish the following nuclear equation: 23892U 🡪 23490Th + \_\_\_\_ |
| 30 | Write the nuclear equation for Samaium undergoing beta emission |
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