**Final Exam Review Self-Assessment**  Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: \_\_\_

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| **Multiple Choice**  **Question** | **Relevant Learning Target** | **Right or Wrong?** | **For any questions you got wrong- simple mistake or need to re-study?** |
| 1 | **VIII. Gases**  (4) Convert pressure between the units of **atmospheres**, **Pascals**, and **millimeters of Mercury**. |  |  |
| 2 | **VIII. Gases**  (6) Perform calculations involving **Boyle’s Law**, **Charles’ Law**, and **Gay-Lassac’s Law**. |  |  |
| 3 | **VIII. Gases**  (6) Perform calculations involving **Boyle’s Law**, **Charles’ Law**, and **Gay-Lassac’s Law**. |  |  |
| 4 | **VIII. Gases**  (6) Perform calculations involving **Boyle’s Law**, **Charles’ Law**, and **Gay-Lassac’s Law**. |  |  |
| 5 | **VIII. Gases**  (7) Solve **combined gas law** problems. |  |  |
| 6 | **VIII. Gases**  (8) State the conditions of **STP**. |  |  |
| 7 | **VIII. Gases**  (10) Perform calculations for gases at STP involving volume, moles, mass, and atoms/molecules. |  |  |
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| 9 | **VIII. Gases**  (11) Perform calculations using the **Ideal Gas Law**. |  |  |
| 10 | **VIII. Gases**  (11) Perform calculations using the **Ideal Gas Law**. |  |  |
| 11 | **VIII. Gases**  (12) Perform stiochiometric calculations involving volume of gases at STP. |  |  |
| 12 | **IX. Solutions**  (4) Perform calculations involving molarity/solution concentration. |  |  |
| 13 | **IX. Solutions**  (4) Perform calculations involving molarity/solution concentration. |  |  |
| 14 | **IX. Solutions**  (5) Perform calculations involving solution dilution. |  |  |
| 15 | **IX. Solutions**  (8) Calculate the concentration of ions in a solution from the concentration of the ionic compound. |  |  |
| 16 | **IX. Solutions**  (10) Determine if a compound is **soluble** or **insoluble** in water using a solubility table. |  |  |
| 17 | **IX. Solutions**  (12) Write the formula equations, complete ionic equation, and net ionic equation for a precipitation reaction, giving the appropriate state for each substance. |  |  |
| 18 | **IX. Solutions**  (14) Perform stoichiometric calculations involving molarity of solutions. |  |  |
| 19 | **X. Acids and Bases**  (3) Calculate pH, pOH, [H+], and [OH‒] for acids and bases. |  |  |
| 20 | **X. Acids and Bases**  (3) Calculate pH, pOH, [H+], and [OH‒] for acids and bases. |  |  |
| 21 | **X. Acids and Bases**  (5) Write a balanced neutralization equation for the reaction of an acid and base to produce a salt and water. |  |  |
| 22 | **XI. Thermochemistry**  (4) Perform calculations involving heat of vaporization and heat of fusion for phase changes of substances. |  |  |
| 23 | **XI. Thermochemistry**  (6) Perform calculations involving specific heat capacity for heating and cooling of substances. |  |  |
| 24 | **XI. Thermochemistry**  (9) Determine if a reaction is exothermic or endothermic from the chemical equation or ∆H value. Given the ∆H value, add the heat term to the appropriate side of a chemical reaction. |  |  |
| 25 | **XI. Thermochemistry**  (10) Calculate the heat of a reaction from tabulated **heats of formation**. |  |  |
| 26 | **XII. Nuclear Chemistry**  (1) Write the **nuclide symbol** for a given isotope. |  |  |
| 27 | **XII. Nuclear Chemistry**  (5) Complete nuclear reactions including those involving alpha, beta or gamma radiations as well as neutrons and protons. |  |  |
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| 29 | **XII. Nuclear Chemistry**  (7) Perform calculations involving half-life in order to solve for mass and time. |  |  |
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| 31 | **XIV. Organic Chemistry**  (1) Name and draw hydrocarbons including **alkanes**, **cycloalkanes**, **alkenes**, **cycloalkenes**, and **alkynes**. |  |  |
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| 33 | **XIV. Organic Chemistry**  (1) Name and draw hydrocarbons including **alkanes**, **cycloalkanes**, **alkenes**, **cycloalkenes**, and **alkynes**. |  |  |
| 34 | **XIV. Organic Chemistry**  (1) Name and draw hydrocarbons including **alkanes**, **cycloalkanes**, **alkenes**, **cycloalkenes**, and **alkynes**. |  |  |
| 35 | **XIV. Organic Chemistry**  (2) Match the structure with the correct name for molecules containing common functional groups including **alkyl halides**, **alcohols**, **ethers**, **aldehydes**, **ketones**, **carboxylic acids**, **esters**, **amines**, and **amides**. |  |  |
| 36 | **XIII. Equilibrium**  (3) Predict the shift on an equilibrium from changing **concentration**, **temperature**, and **pressure/volume**. |  |  |
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| 39 | **XIII. Equilibrium**  (4) Write a Keq expression for an equilibrium. |  |  |
| 40 | **XIII. Equilibrium**  (5) Calculate Keq for reaction from the concentration of each chemical at equilibrium. |  |  |

What learning targets were the most difficult on the practice multiple choice?

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What are you going to do to master these learning target for the final exam?

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If you did well on all of the learning targets, what did you do to effectively study/prepare?

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