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|  | Points Value | Points Received |
| **Format**  Typed, Double Spaced, Grammar, Professionalism | 2 |  |
| **Cover Page**  Name(s), Course #, Date [1]  Abstract (3-5 sentences) [4]  \*Purpose of the lab  \*Methods  \*Results  \*Conclusions | 5 |  |
| **Introduction & Theory**  How does the refrigeration cycle work [5]  \* Explain the p-h diagram and different processes throughout the cycle  Concept of COP, how to determine COP during lab and after lab by using data [5]  \*\*Make sure that you label and explain any/all equations that you will use | 10 |  |
| **Methods**  Equipment used [2]  Experimental setup procedure [2]  Experimental procedure (by your own words) [6] | 10 |  |
| **Results**  In process checks [5]  \* Show calculation of COP during the experiment  Plot of p-h diagram for your refrigeration cycle [10]  \* Graph with steam table curve  Data used for you graphs (not all the data) [1]  Determine values of h1, h1x, h2x, h3x, h4x for used data [5]  Calculation of COP by using experimental data, explain the difference of COP between in-process calculations and after-lab calculations [4] | 25 |  |
| **Sources of Error**  Standard deviation calculations for all appropriate data.  Some discussion of feasible sources of error. | 5 |  |
| **Discussion**  After Lab Exercises:  Q1: show your calculation steps clearly [10]  Q2: name sources of gain and loss [5] Quantification [5]  Q3: Temperature vs. Time plot [15]  \* proper axes titles, units, etc.  \* general equation, explain.  \* curve fit with equation, show your steps of curve fitting and explain. | 35 |  |
| **Conclusion**  What did you learn and why is it important.  Summarize results and discussion. | 5 |  |
| **References** Include all the references used. \* steam table data, software used, websites referred, etc. | 3 |  |