1) How and why the test demonstrates your work toward one, or more, of the course learning objectives. Be specific on the course objectives you decide to mention.

Three specific learning objectives were tested. They are:

1. Develop an intuitive understanding of how to apply the first and the second law of thermodynamics to different thermal systems.
    a. This was tested in both questions
2. Define the thermal efficiency, second law efficiency, and energy availability.
    a. This was tested in the second question
3. Demonstrate the knowledge of understanding of the basic vapor compression refrigeration and heat pumps cycles.
    a. This was tested in the second question
4. Develop the knowledge to calculate moist air properties (Psychrometry).
    a. This was tested in the second question
5. Define different air-conditioning processes using the Psychometric chart
    a. This was tested in the second question

2) How your test compares against the available solution. State the mistakes you made and what you will do next time to avoid making same mistakes. Please point out exactly where you made the mistake, say why you made the mistake, and how you should have done it. If you were taking this test again, what advice would you give yourself to ensure that you had a successful test?

a. For the first problem, I subtracted the change in internal energy. I should have realized that this didn't make sense. In the future, I should think more critically about final answers to determine if they pass the commonsense test.

b. For the second problem, I didn't have some answers in the same units as the posted solution (I answered in KJ/kg and you used KW). Also, the questions stated to find "The lowest temperature difference between the refrigerant and the air passing by the condenser." I took that literally and found the smallest delta t that was in the systems and therefore got a different answer. I could have asked you to clarify, but at the time, I wasn't something that I felt unclear about.

3) What your grade should be. Base it on the writing rubric provided in the test and the correctness of your solution. What are the strengths and weaknesses of your test?

Based on the rubrics my grade is the following:

Problem 1. Writing 9/10 (no pv and ts diagram and analysis weak, Solution 7.5/8

Problem 2. Writing 9.5/10 (no materials section, Solution 10.5/12

Overall 81.75/90 +8.885714 (hw) = 90.61

4) Discuss the following:

a. What issues did you encounter in completing the test? How did you troubleshoot them?

I had trouble figuring out how to start the first one. I had trouble understanding how something could be compress isobarically. After I realized that it would have to be cooled, I was able to proceed.

b. What steps did you take to complete the whole test? Would you change something?

I completed the pretest. The help you provided from this assignment really helped me. I'll do that again.

c. What new concepts have you learned? The basic high school concepts were re-introduced, but the psychometric chart and use of the tables were all new to me.

d. Where you think engineers use those concepts (provide specific examples)? Designing HVAC systems for building. Troubleshooting malfunctioning AC systems.

e. Where do you think you will be using everything you learned? I will be using these skill for the rest of the semester, and possibly at a job.

f. Do you think what you learn is important for your professional career? Yes, each problem is unique, and you never know what skills and concepts will be needed.

g. How, when, where and why you might use this information or skill in the future? It depends on the job, but certain engineers would use these concepts every day

h. Have you been able to apply concepts you have learned in the course to what you do at work or in other courses? These skills are tested and relevant for the FE review class

i. What areas did you feel you were most successful, or improved the most? Using tables and charts

j. How do you see this course's content intersecting with your field or career? Again, it depends on the job, but I feel much more confident about interviewing for a job related to HVAC systems.

k. How much time did you spend on the test? How was the time organized? What would you do differently? Why? About 10 hours. 3 hours on the pretest and 7 to complete. I felt like I spent my time well this time, but I learned some lessons on tests from you in previous semesters.