Meah Ferguson MET 330 Test 3 Reflection

In test 3 there were several course objectives covered from the syllabus. Some of those are include industrial problems such as open channel flow, pipes, and forces in pipes. As well as applying the conservation of energy with Bernoulli's equation which has been built up this entire semester. In addition, I have become more comfortable with using excel as a calculator after our one-on-one meeting and successfully executed that on this test problem 3. My test has several similarities and differences with the actual test solutions. My strengths on the test were getting all the problems completed in a way that I felt comfortable and much more confident in my answers compared to our previous test, but my weaknesses were going back and forth between problems which led to little errors. For example, I forgot to indicate on problem 2 if it was subcritical or supercritical which based on my numerical answer I was able to easily write down supercritical but I did not which causes a entire point off the question. I had issues with some equations throughout the test early on in the problems which lead to issues at the beginning of the problem that hindered being successful throughout the remainder. To complete the test, I worked on a little bit each day and worked through it with our provided examples. If I could do something differently, I would have finished the homework due on the same day earlier if time allowed so I wasn't working on an assignment and test at the same time. This information and skills will be beneficial in many areas and used by engineers who are working with flow rates, pipe designs, and determining appropriate materials for these designs. I may be able to use this in the work force during the design process with conservation of energy and flow rate that could be used for plumbing and piping and could also be used for personal home improvement. I felt very successful and most improved with Bernoulli's equation since even with errors in using it I still feel comfortable with having the equation memorized and working on problems with it. I spent at least an hour or 2 every day that the test was available to get this completed. Since the problems in the solution are not the exact same numbers as mine based on UIN I am taking a guess if the final results make sense based on the solutions worked out. Overall even with a test grade that I don't think fully displays my potential based on the grading rubric the mistakes I made show that I was at least on the right track and have grasped the concepts even if they were incorrectly executed.

Self grading

PROBLEM 1)

1. Moment with respect to A 1/5 out of 1/5
2. Correct distances 0/5 out of 1/5
3. Correct Cd using Re and forces 0/5 out of 2/5
4. Results 0/5 out of 1/5

TOTAL **1/5 out of 5/5**

PROBLEM 2)

1. Correct Q equations (look at constant) 1/6 out of 1/6
2. Correct A and Hydraulic radius R 1/6 out of 1/6
3. Solving by iteration 2/6 out of 2/6
4. Is it critical? 0/6 out of 1/6

5. Results 1/6 out of 1/6

TOTAL **5/6 out of 6/6**

PROBLEM 3)

1. Correct eq for Q for nozzle 0/5 out of 1/5
2. Use Re to get C 1/5 out of 1/5
3. Solving by "h" 2/5 out of 2/5
4. Results 1/5 out of 1/5

TOTAL **4/5 out of 5/5**

PROBLEM 4)

1. Compute pressures using Bernoulli's 1/7 out of 1/7
2. Compute height with length 0/7 out of 1/7
3. Appropriate control volume? 1/7 out of 1/7
4. Rx (be careful with velocity direction) 0/7 out of 1/7
5. Ry (be careful with velocity direction) 0/7 out of 1/7
6. Compute Q with Bernoulli's 0/7 out of 1/7
7. Results 0/7 out of 1/7

TOTAL **2/7 out of 7/7**

PROBLEM 5)

1. Correct C (be careful with units) 2/4 out of 2/4
2. deltaP 1/4 out of 1/4
3. Results 0/4 out of 1/4 (I did not correctly find direction)

TOTAL **3/4 out of 4/4**

FINAL GRADE: (if everything is correct)

(90/5)*(1/5 + 5/6 + 4/5 + 2/7 + 3/4) = 65%