	ODU MET 330 Fluid Mechanics	Topic: Test#2 Reflection

1. Test 2 covered the following course objectives:
    a. Fluid properties
        i. Viscosity
        ii. Pressure
    b. Computed Forces
        i. Magnitude
        ii. Location
        iii. Directions
    c. Buoyancy
        i. Stability
        ii. Submerged
        iii. Drag
    d. Bernoulli's Equation
        i. Pressure
    e. Computed Friction losses
        i. Series
    f. Solve for following:
        i. Open Channel
        ii. Cavitation
        iii. Water Hammer
        iv. Drag
        v. Forces inside a Pipe
        vi. Flow Velocity
2. Comparison of Test-to-Test Key:
   The procedure I used to solve the problems were in-line with the test key. The first problem took the most time to solve, then I was able to struggle-less with the rest of the questions. The answers I calculated were within 5% to 10% of the test key answers. I feel this test was challenging and it made me think about the process of solving the problems. I reviewed the video lectures from class and re-read the corresponding chapters a couple of time as well. The mistakes I made on this test was not solving for the actual length of the log. I found the percentage of the log under the water and above but was not sure about how to calculate the actual length. I believe I should use the mass for this part but I did make a reasonable assumption of 3 in square log for calculating the drag force. Next time I would study more about drag force problems.
3. Base on the Writing Rubric I would score a 71% on the test. I believe my strength are being organized with my notes and examples covered in class. This helped me find the correct equations and topic to review for the solving the problems. I need to be able to solve the problems in a more efficient manner.
4. a. The problem I had with the test, was getting started on each problem, once I figured out which topic is related to the chapter, I was able to review my notes and read the corresponding

chapters to help me solve the problem. I learned about the drag force and pressurized tanks on this test, plus the concepts of open channels.

b. I would not change the way I approached the test, however on the test over the weekend. I would, however would like to have more of quiet place to complete the test. I was interrupted a couple of times to take care of a few issues.
c. The new concepts I learned were the Open Channel and forces on the end of the pipe system, plus determining the drag force and finding the pressure drop for a flow nozzle. I have installed and performed maintenance on all of the concepts covered on this test but did not understand about the mathematics behind the systems.
d. While working as an apprentice at Newport New Shipbuilding, I worked along side many of the engineers who were solving issues with the various systems aboard the ships. The reactor plant is where I spent the bulk of my time, which was slow because you were not allowed to do anything without a procedure or specific instructions on installation and testing the systems.
e. I plane to teach courses related to many of the concepts covered on this test and course. Taking this class has allowed me to gain a better understanding of how the reactor plant and basic steam system cycles work on the ships. I have compiled a large about of time installing the refrigeration system and Chillers on a nuclear submarines and aircraft carriers. I may be interested in taking the class on Refrigeration Cycle.
f. I have a better understanding of how the course Thermodynamics and Fluid Mechanics work together now. By taking these classes I understand the engineering concepts being taught to us and where they may apply in an industrial environment.
g. Teaching classes where the concepts may come in play like Ship Construction which is marine engineering courses about the Basic Steam Cycle. I gaining a better understanding of the concepts and applications used in the field.
h. My knowledge of the various systems (shipboard and industrial manufacturing plants) has increase as to the application of the mathematics plus engineering concepts.
i. This course is showing me the mathematics behind the engineering design of various systems I have worked on in the past, plus I now able to related the concepts to my students in the more professional manner. This course is provided me a great deal confidence when I am discussing concepts like the Energy Losses for the pipe itself, which I did not realize until taking this course.
j. I spend a good 9 hours on the test, 3 hours a block at a time working on the test. I believe I did the same thing on the first test as well.