FPST 2483 Lab #1 Name:_____

Objective:

The objective of this laboratory is to introduce the student to laboratory operating procedures and let the student know what is to be expected during the laboratory sessions.

Laboratory Report Format:

Several laboratory reports will be required of students during the course of the semester. Laboratory reports will not be graded unless conforming to the following format and standards:

1. Each report must have a title page containing at least the following information;
Report Title
Students Name
Date Submitted
Date of the Laboratory
Fire Protection and Safety Technology
Oklahoma State University

2. Each report must be typewritten.
3. Each report must contain at least the following sections and each section must have a heading:
Introduction and Objective
Procedure
Results and Calculations
Summary and Conclusion

4. To the extent possible students should use tables and graphs. Each table and graph must have a title, with titles of tables appearing above the table and titles of graphs below the graph. Columns and rows for tables should be enclosed with lines. Examples are shown below.

Table 2.1 Test results

Test No.	Pressure	Flow
1	86	810
2	72	640

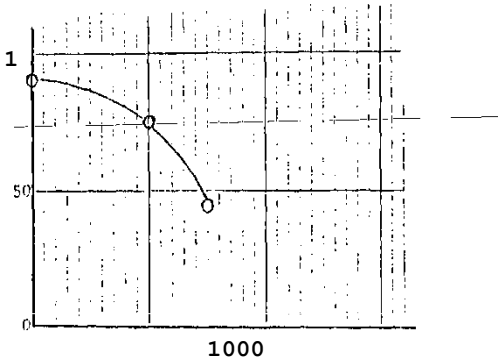


Figure 3.1 **Pump Test Results**

5. A picture is worth a thousand words (or at least several hundred). Wherever possible, use diagrams or drawings. This is especially useful in efficiently describing the procedure.

6. All important equations and formulas should be presented. When presenting an equation, never include it within a typed line of a sentence. Always separate it out. Good and bad examples follow. Also, always define the variables in the equation.

BAD: The formula for calculating flow is Q=AV, and this formula has...

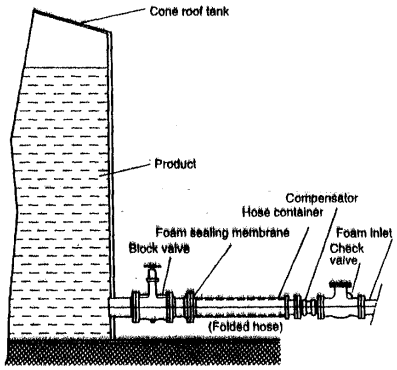
GOOD: The formula for calculating flow is as follows:

Q=AV (Equation 1.1)

here Q is flow in gpm,
A is area in sq. in, and
V is water velocity in fps.
This formula has...

7. A few sample calculations should be included in the report. All calculations should not be shown.

8. Reports should be written in third person past tense. Tell what was done, not what to do. Do not use "I think", "I believe", "In my opinion", etc.
9. Reports must be neat and pleasing in appearance. Do not scratch out words. Reports must be typewritten. Ask yourself the question "Would I want a prospective employer to see this report?"



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1. If a storage tank has dimensions of 5 ft. x 8 ft. x 4 ft.:
    a. What is the volume in cubic feet?

    b. What is the volume in cubic inches?

    c. What is the volume in gallons?

    d. What is the volume in liters?

    e. What is the volume in cubic centimeters?

2. A spherical tank has a diameter of 45 feet.
    a. How many gallons of water will the tank hold?

    b. How many liters of water will the tank hold?

3. What will be the weight of 1000 gallons of water in pounds and kilograms?

4. Assume someone's body weight is W=160 lbs and height is H=69 inches. What is the weight in kilograms and height in meters? (Note: 1 inch = 2.54 centimeters)

5. If water is flowing at a rate of 1000 gpm, how many liters per minute are flowing?

6. If one bar is equal to 14.7 psi, how many bars are equal to 100 psi?