**Physics Unit 6: Phases of Matter Test Review**

**Test Setup:**

Multiple Choice: 16 (1 pt each ) Short Answers: 7 (5 pt each) Problems: 8 (6 pt each)

**Short Answers:**

1. Why are solid objects not considered to be fluids?
2. How does a gas change shape when it is poured from a small flask into a larger flask?
3. Why is the net force on a submerged object called its “apparent weight”?
4. What determines whether an object will sink or float?
5. Describe how Pascal’s principle allows the pressure throughout a fluid to be known.
6. What does Bernoulli’s principle state will happen to the pressure in a luid as the speed of the fluid increases?
7. Use Bernoulli’s principle to explain why a nozzle on a fire hose is tapered.

**Multiple Choice:**

1. What are expmles of fluids?
2. Define fluids.
3. Define liquids
4. Define gases
5. How does pressure and density relate in incompressible fluids?
6. Know the formula for calculating buoyant force
7. What is true of the bouyant nature of an object completely submerged in water
8. Define Pascal’s principle
9. Know the formula for pressure of a fluid
10. What are the characteristics of an ideal fluid?
11. What are examples of laminar flow?
12. What are examples of turbulent flow?
13. Why does an ideal fluid move faster through a pipe with decreasing diameter?
14. Why does the lift on an airplane wing increase as the speed of the airplane increase/

**Problems:**

Density: 2

Pressure: 2 ( go over pressure and depth handout)

Hookes Law: 2 ( Hookes Law handout)

Bouyant force: 1 ( go overs Archimedes principle, Pascals law handout)

Net force: 1 (pressure and depth handout)

1. What is the spring constant of a spring that needs a fore of 3N to be compressed from 40 cm to 35 cm?
2. What is he magnitude of the force required to stretch 2 sprngs of cnstoaant k1 = 200N/m and k2 = 400N/m by 3 cm if they are in parallel?