Blitz Ch 10 & 11, Form S

Name _____ Period ____

This is a Take Home Exam. You may use your notes but you may NOT use help from human beings.

EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES:

You MUST HAND WRITE THIS EXAM!! NO TYPED PAPERS WILL BE ACCEPTED!

1. Discuss and explain FIVE devices for measuring temperature.

2. Draw the warming curve for water, label its parts, and tell what is happening at each of the FIVE positions.

3. Describe the TWO Laws of Thermodynamics, and give an example of each.

4. Discuss **TEN** of the fifteen shocks of *Vapor Pressure and Boiling Point* and give an example of each.

5. Discuss *Maxwell's Demon* and *Boltzman's Statistics*.

***** SHOW METHOD OF SOLUTION FOR ALL PROBLEMS (The 1,2,3,4!)**

6. A piece of Cu wire is 7.80 m long at 28.0°C. Find its increase in length at 69.2°C. $\alpha = 1.68 \times 10^{-5}$.

7. If 42.5 g of water at 26.2°C is mixed with 68.5 g of water at 39.4°C, find the final temperature.

8. Find the number of joules obtained by burning 22.00 liters of gasoline. Density of gasoline = 0.700 g/cm^3, and it liberates 1.15 X 10^4 cal/g. 1cal = 4.18 j. 1 L =1000 cm^3.

9. Find the total number of calories needed to change 44.0 g of ice at -29.3°C to steam at 452.0°C. Show all FIVE steps. See sample problem.

10. A piece of metal massing 113.0 g at a temperature of 100.0°C is dropped into 59.6 g of water at 21.4°C. The final temperature of the mixture is 28.2°C. Find the specific heat of the metal.

STUFF:

Heat Lost = Heat Gained	sp.ht. ice = 0.530 cal/g.C°
$\Delta l = \alpha l \Delta t$	sp.ht. water = 1.00 cal/g.C°
$Q = mc\Delta t$	sp.ht. steam = 0.481 cal/g.C°
ht.fus. ice = 80.0 cal/g	ht.vap. water = 538 cal/g

When finished, please STAPLE this exam onto your papers and turn in on due date.