CMGT 235 – Electrical and Mechanical Systems

Department of Construction Management ❁ California State University, Chico

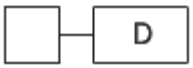
Homework #6 – HVAC and Psychrometrics

Points: 30

Due: 2/18/2016

Name: _____

1. Identify each of the HVAC symbols shown:

2. Air speed is measured in _____.

3. Air volume is measured in _____.

<u>Use a Psychometric Chart to answer questions 4-11</u>

4. If you have a wet bulb temperature of 55 degrees and a relative humidity of 60%, what is the dry bulb temperature? _____

5. If you have a relative humidity of 75% and an absolute humidity of 80, what is the dry bulb temperature?

_____

6. If you have a dry bulb temperature of 68 degrees and an absolute humidity of 70, what is the relative humidity? _____

7. If you have a wet bulb temperature of 45 degrees and a dry bulb temperature of 65 degrees, what is the relative humidity? _____

8. If you have a wet bulb temperature of 25 degrees and a relative humidity of 90, what is the dry bulb temperature? _____

9. A space at sea level is 70°F and RH = 55%
   Find the other properties of the air in that space.

DB	°F
RH	%
WB	°F
Humidity	Gr/lb
VP	In Hg
Enthalpy	Btu/lb
Vs	ft^3/lb
Dew Point	°F

10. A saturated mixture contains 150 lb of dry air. How much heat is required (Btu) to raise the dry bulb temperature from 45°F to 70°F?

11. If you have a wet bulb temperature of 55 degrees and a relative humidity of 55, what is the dry bulb temperature?

12. Relative humidity is _____% at the saturation line.

13. A(n) _____ is the amount of heat required to raise 1 lb of water 1°F.

14. _____ Btu is the amount of heat required to melt a ton of ice over a 24-hour period.

15. Enthalpy is the sum of latent heat and _____ heat.