Psychrometric Checklist
For the PE Exam

Test Date: _____   Name: _____

	Confident	Knowledgeable	Need More Work
Psychrometric Terms			
1. <u>Dry Bulb/Wet Bulb</u>. *Do you understand the difference between Dry Bulb and Wet Bulb temperatures? How are the two different temperatures measured? What does each temperature indicate?*			
2. <u>Relative Humidity/Specific Humidity/Humidity Ratio</u>. *Do you understand the difference between Relative and Specific Humidity? Relative humidity is in comparison to what reference point? What is the difference between Specific Humidity and Humidity ratio? What does it mean when relative humidity is equal to 100%(relation to dry bulb/wet bulb temperatures)? What does relative humidity equal for dry air?*			
3. <u>Specific Volume</u>. *What are the units of specific volume? How is specific volume related to density? What is the standard specific volume and density used in typical problems?*			
4. <u>Sensible Heat</u>. *What values are needed to calculate sensible heat? What does sensible heat indicate? What is the formula for calculating sensible heat (quick and easy version)? Sensible heat gain/loss is indicated by what movement on the psychrometric chart. What HVAC equipment affects Sensible Heat only?*			
5. <u>Latent Heat</u>. *What values are needed to calculate latent heat? What does latent heat indicate? What is the formula for calculating latent heat (quick and easy version)? Latent heat gain/loss is indicated by what movement on the psychrometric chart. . What HVAC equipment affects Latent Heat only?*			
6. <u>Enthalpy</u>. *What is the formula for calculating enthalpy (quick and easy version)? How is enthalpy related to sensible and latent heat? What is the*			
7. <u>Dew Point</u>. *What is the difference between dew point and wet bulb temperature? When does the dew point of an air mixture equal the wet bulb temperature?*			
8. <u>Saturation Curve</u>. *What is the saturation curve? What is relative humidity equal to at the saturation curve?*			
9. <u>Sensible Heat Ratio</u>. *What is the sensible heat ratio? What does the sensible heat ratio compare?*			

10.	Constants. *What is the latent heat of vaporization of water[US units]? What is the specific heat capacity of air[US units]?*			

Navigating the Psychrometric Chart

1.	Different Psychrometric Charts. *What value is held constant for each psychrometric chart? Do you have a psychrometric chart handy?*			
2.	Finding Points on the Chart *Given two values (DB/WB/Rel Hum./Hum. Ratio/Enthalpy/Specific Volume,/Dew Point), can you find the other 5 values?*			
3.	Movement - Sensible *Given two points on a psychrometric chart and the CFM, can you find the sensible heat gain/loss? Given a single point, CFM and the sensible heat gain/loss, can you find the final point?*			
	Movement - Latent *Given two points on a psychrometric chart and the CFM, can you find the latent heat gain/loss? Given a single point, CFM and the latent heat gain/loss, can you find the final point?*			
4.	Movement - Enthalpy *Given two points on a psychrometric chart and the CFM, can you find the enthalpy gain/loss? Given a single point, CFM, sensible heat ratio and the change in enthalpy, can you find the final point?*			
5.	Air Mixture *Can you determine the final points of two different air mixtures?*			
6.	Condensation *Can you determine whether air at specific conditions, will condense on a surface of a certain temperature?*			
7.	Evaporative Cooling *Can you describe evaporative cooling and indicate the movement on a psychrometric chart?*			
8.	Cooling Coil *Can you describe how a cooling coil works? Can you indicate the movement on a psychrometric chart?*			
9.	Heating Coil *Can you describe how a heating coil works? Can you indicate the movement on a psychrometric chart?*			
10.	Humidifier *Can you describe how a humidifier works? Can you indicate the movement on a psychrometric chart?*			
11.	Dehumidifier *Can you describe how a dehumidifier works? Can you indicate the movement on a psychrometric chart?*			