

## “A” Card Study Guide

Basic refrigeration and air conditioning controls

Refrigeration control valves (low ambient, evaporate. pressure regulators and defrost methods)

CFM per ton

Celsius conversion

Sensible and latent heat

Vacuum conversions

Evacuation procedures

400 series refrigerants

Superheat and sub cooling conversion

Water pressure conversion (height to pressure)

Air density calculations

Dew point-humidity

Fan laws

Basic electrical print reading and theory

Ohms law

Low voltage thermostat wiring

Electrical ladder diagrams

Single phase current and potential start relays

Single- phase motor types and wiring

Electrical motor theory (three phase)

Single phase compressor terminal identifying

Three phase motor wiring

Large motor starters, wye or star-delta and auto transformer style

V.A. of a transformer

Lithium Bromide Absorption theory

Centrifugals water chillers

Refrigerant removal

Combustion controls (analyzing flue gas)

Flame safe guard controls

Boiler theory

Digital direct controls-basic operation, digital and analog inputs and out puts

Pneumatic theory- receiver controllers, direct and reverse acting

Hydronics (Heating and cooling with fluid) theory and related design

Low temp industrial refrigeration (Ammonia)

Please bring a calculator for the exam