Listed below are a number of items and subjects which make up the mechanic certification test identified above. An individual’s ability to pass the certification test will depend upon the amount of knowledge the person has concerning these items.

**Heating & Engine Cooling System**

**Diagnosis - 22%**
- Leak diagnosis
- Low coolant in radiator
- Thermostat Coolant mixture Low heater
- output Windshield fogging
- Heater core hose routing
- Radiator cap
- Defrost operation
- Overheating

**General Knowledge of A/C Components & Their Functions - 16%**
- Receiver drier
- Ambient temperature switch
- Orifice expansion tube
- Compressor muffler Condensor
- Evaporator
- Fixed orifice tube
- Halide tester

**General Knowledge of A/C Systems - 18%**
- R-12 v.s. R134-a
- Refrigerant (understanding change between liquid & gas)
- Operating pressures
- Effect of moisture in the system
- Effect of outside temperature & humidity on system

**A/C Diagnosis - 24%**
- H2O at air ducts
- Finding leaks
- Overcharged system
- Compressor clutch
- Gauge set readings
- Lack of cold air
- Schematic diagnosis

**A/C Repair Procedures - 16%**
- Precautions when discharging system
- Compressor o-ring replacement
- Correction of excessively high pressure
- Compressor replacement
- Hose replacement
- Charging the system
- Leak detection
- Condensor replacement

**Refrigerant Recovery, Recycling & Handling - 4%**
- CFC’s (Chlorofluorocarbons) and their affect on the environment
- Recycle or replace R-12 and R-134a

**SAMPLE QUESTION:**
An A/C control system has an apparent vacuum leak. Which of the following is the best way to locate the leak?

A. Feel around the suspected line or component.
B. Trace the origin of the hissing sound.
C. Install known good hoses and components in place of the original components.
D. Spray water on the suspected areas.

**ANSWER: B**