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.

**Computer Control & Sensor Basics - 24%**
- ROM (Read Only Memory)
- Fault codes
- Maintaining stoichiometric balance
- Closed loop
- Oxygen sensor diagnosis
- Knock sensor function
- Self diagnosis
- Hall sensor pattern reading
- Types of meters to use
- Scan tool usage
- TPS operation

**Ignition Systems - 13%**
- Scope pattern diagnosis
- Setting timing
- No spark diagnosis
- Spark plug voltage requirements

**Carburetor & Fuel Injection - 10%**
- Injector pulse width
- Fuel line replacement
- E.F.I. principals
- “Heavy float” symptoms
- Types of injection systems

**Performance Basics - 10%**
- Causes of detonation
- Spark plug diagnosis
- Dirty air cleaner symptoms
- Causes of a lean mixture
- Influences on performance

**Diagnosis (starting system & misc.) - 18%**
- Engine timing
- Slow cranking diagnosis
- Circuit resistance checks
- Engine vacuum
- Catalytic converter
- Cylinder leakage
- Compression test

**Emission Control Systems - 25%**
- EGR operation
- Evaporative emission control system
- Hydrocarbon levels
- Oxides of nitrogen
- \(O_2\) sensor operation
- Fuel vapor recovery system
- Carbon monoxide levels
- Exhaust analyzer readings
- Engine timing & effect on emissions
- Catalytic converter’s purpose

**SAMPLE QUESTION:**
In automotive computers, this memory contains information that tailors the computer to the vehicle.

A. Programmable Read Only Memory (PROM).
B. Controllable Access Memory (CAM).
C. Random Access Memory (RAM).
D. None of the above.

**ANSWER:** A