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Of the 75 questions on the test, 40 cover vehicle systems knowledge. In addition to vehicle knowledge, there are 10 question on general operations; 11 questions on customer relations on sales skills; three questions on vehicle identification; six questions on catalog information and systems skills; three questions on inventory management; and two questions on merchandizing.

In our ASE P2 Test Study Guide, we provide an overview of the parts and systems covered on the test.

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By Larry Carley

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AS E P2 Review Quiz:  
Automatic Transmission/Transaxles

1. Counterman A says “Mercon LV” transmission fluid is used in newer Ford and Mercury vehicles.  
   Counterman B says “Dexron-VI” fluid is used in newer Chrysler vehicles.  
   Who is right?  
   a. Counterman A only  
   b. Counterman B only  
   c. Both Counterman A and B  
   d. Neither one

2. Transmission fluid that is brown and has a burnt smell:  
   a. Is badly oxidized and needs to be replaced  
   b. Can damage the transmission  
   c. Has probably been subjected to overheating  
   d. All of the above

3. “ATF+4” automatic transmission fluid is used primarily in what make of vehicle?  
   a. Chrysler  
   b. General Motors  
   c. Ford  
   d. Honda

4. Using the wrong type of transmission fluid:  
   a. May cause shifting problems  
   b. May cause slipping problems  
   c. May damage the transmission  
   d. All of the above

5. Draining an automatic transmission by removing the pan removes how much of fluid?  
   a. All of it  
   b. 90% of the fluid  
   c. 50% to 70% of the fluid  
   d. 25% of the fluid

6. All of the following statements about torque converters are true EXCEPT:  
   a. It is located between the engine and transmission  
   b. It is located between the transmission and driveshaft  
   c. It is filled with automatic transmission fluid  
   d. It usually has no drain plug

7. Counterman A says a bad torque converter may give a vehicle poor acceleration and fuel economy.  
   Counterman B says the lockup clutch inside a torque converter engages above certain speeds or when the transmission is in 3rd or 4th gear to improve fuel economy.  
   Who is right?  
   a. Counterman A only  
   b. Counterman B only  
   c. Both Counterman A and B  
   d. Neither one

8. The type of ATF required for a transmission may be found:  
   a. On the transmission dipstick  
   b. In the owner’s guide  
   c. In service information database  
   d. Any of the above

9. The leading cause of automatic transmission failure is:  
   a. Overheating  
   b. Dirt  
   c. Speeding  
   d. Fluid leaks

10. All of the following are true about “CVT” transmissions EXCEPT:  
    a. They require a special type of transmission fluid  
    b. They have no filter  
    c. They usually have a specified fluid change interval  
    d. They improve fuel economy
ASE P2 Review Quiz: Brakes

1. A common cause of brake pedal vibration or shudder when braking is:
   - a. Uneven rotor wear (a “warped” rotor)
   - b. Scored rotors
   - c. Leaky calipers
   - d. Low fluid level

2. Brake rotors should be replaced:
   - a. If cracked
   - b. If worn below minimum thickness or discard specifications
   - c. If they have hard spots
   - d. All of the above

3. The “machine to” specification on a brake drum:
   - a. Is the same as the discard thickness
   - b. Is the maximum diameter the drum can be safely machined to
   - c. Is the inside diameter of a brand new drum
   - d. Is the diameter the drum must be machined to when it is turned

4. Counterman A says “Low Copper” brake pads are replacing many current friction materials.
   Counterman B says “Low Copper” brake pads are required in some states now.
   Who is right?
   - a. Counterman A only
   - b. Counterman B only
   - c. Both Counterman A and B
   - d. Neither one

5. If the brake pedal slowly sinks to the floor when stopped at a traffic light, which of the following probably needs to be replaced.
   - a. Calipers
   - b. Wheel cylinders
   - c. Master cylinder
   - d. Brake pads

6. What type of brake fluid is most commonly used in domestic passenger cars?
   - a. DOT 3
   - b. DOT 4
   - c. DOT 5

7. “Bleeding the brakes” is done for what purpose?
   - a. To remove moisture contamination
   - b. To remove air bubbles for a firm pedal
   - c. To remove contaminated fluid
   - d. All of the above

8. “Flushing the brakes” is done for what purpose?
   - a. To remove moisture contamination
   - b. To remove old worn out brake fluid
   - c. To restore corrosion protection
   - d. All of the above

Continued on page 80
ASE P2 Quiz: Cooling System

1. Counterman A says most cars and light trucks today have “crossflow” radiators where the coolant flows from one side to the other.
   Counterman B says most new cars have radiators that are made of soldered copper/brass.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

2. All of the following statements are true about radiator caps EXCEPT:
   a. Caps relieve pressure to prevent freezing
   b. Caps are spring-loaded to pressurize the cooling system
   c. Pressurizing the coolant raises its boiling temperature
   d. Caps should be tested or replaced if the radiator is replaced

3. Any of the following may cause an engine to overheat EXCEPT:
   a. Loss of coolant
   b. Too much water in coolant
   c. Defective thermostat (stuck shut)
   d. Faulty electric cooling fan, fan thermostat or fan relay

4. The recommended antifreeze/water mixture for most vehicles is:
   a. 70% antifreeze & 30% water
   b. 60% antifreeze & 40% water
   c. 50% antifreeze & 50% water
   d. 40% antifreeze & 60% water

5. A thermostat does what?
   a. Regulates the operating temperature of the engine
   b. Affects the operation of the computerized engine control system
   c. Speeds engine warm-up
   d. All of the above

6. Counterman A says a leaky head gasket is a common cause of coolant loss and engine overheating.
   Counterman B says a wobbly shaft or leaks from the vent hole are indications of a water pump that needs to be replaced.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

Continued on page 80
ASE P2 Quiz: Driveline Components

1. Counterman A says constant velocity joints are used on front-wheel drive cars and some rear-wheel drive cars. Counterman B says a worn outer CV joint often makes a clicking noise when turning.

Who is right?
- a. Counterman A only
- b. Counterman B only
- c. Both Counterman A and B
- d. Neither one

2. What type of CV joints “plunge” and allow the halfshaft to move in and out as the height of the suspension changes?
- a. Rzeppa CV joints
- b. Tripod CV joints
- c. Crossgroove CV joints & Double-Offset CV joints
- d. All of the above

3. The rubber or plastic boot around a CV joint does what?
- a. Keeps out moisture
- b. Keeps out dirt
- c. Prevents the loss of grease
- d. All of the above

4. Counterman A says U-joints can cause driveline clunks and vibrations if the joint is worn. Counterman B says a CV joint will soon fail if a leaky, torn or missing boot is not replaced.

Who is right?
- a. Counterman A only
- b. Counterman B only
- c. Both Counterman A and B
- d. Neither one

5. Constant velocity joints require what type of grease?
- a. CV joint grease
- b. Chassis grease
- c. Multipurpose grease
- d. Any of the above

6. All of the following statements about “Rzeppa” CV joints are true EXCEPT:
- a. They can operate at angles of up to 90 degrees
- b. The joint contains six steel balls
- c. They are most often used for the outer joint on FWD cars
- d. They are sealed inside a protective rubber or plastic boot

7. All of the following statements about “tripod” CV joints are true EXCEPT:
- a. They allow the halfshaft to plunge in and out
- b. They contain three roller bearings on a tripod
- c. They are used on many domestic and import vehicles
- d. They are used only for inner joints on FWD cars

8. Counterman A says a replacement halfshaft must be the same length as the original. Counterman B says some vehicles like Honda may use any one of several different halfshaft assemblies.

Who is right?
- a. Counterman A only
- b. Counterman B only
- c. Both Counterman A and B
- d. Neither one

9. Counterman A says a worn wheel bearing make chirping or growling noises while driving. Counterman B says wheel bearing grease seals can always be reused when servicing the wheel bearings or front disc brakes.

Who is right?
- a. Counterman A only
- b. Counterman B only
- c. Both Counterman A and B
- d. Neither one

10. Sealed wheel bearings:
- a. Cannot be lubricated
- b. Must be replaced as an assembly
- c. Are not adjustable
- d. All of the above
1. Which of the following components is NOT a part of the emission control system?
   a. EGR valve
   b. Voltage regulator
   c. Oxygen sensor
   d. Powertrain control module (PCM)

2. Counterman A says oxygen sensors monitor the engine’s air/fuel mixture.
   Counterman B says three-wire oxygen sensors have a heater element inside for faster warm-up.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

3. Counterman A says a “Check Engine” light usually indicates a fault that affects emissions.
   Counterman B says a car can usually pass an OBD II plug-in emissions test by clearing any trouble codes just before the test.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

4. A “sluggish” oxygen sensor:
   a. Responds too slowly for good engine performance
   b. Probably has a lot of miles on it
   c. May be contaminated
   d. All of the above

5. Crankcase combustion vapors and moisture are eliminated by which of the following emission control devices?
   a. EGR valve
   b. PCV valve
   c. Catalytic converter
   d. All of the above

6. Counterman A says a plugged EGR valve will cause carbon monoxide (CO) emissions to increase.
   Counterman B says spark knock (detonation) is a common drivability symptom of a defective EGR valve.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

7. The “EVAP canister” does what?
   a. Vents crankcase vapors
   b. Stores fuel tank vapors
   c. Traps exhaust soot on diesel applications
   d. Vext exhaust gas pressure on turbocharged engines

8. What is the minimum federal emissions warranty requirement for an aftermarket replacement catalytic converter?
   a. 2-years/24,000 miles
   b. 3-years/36,000 miles
   c. 5-years/50,000 miles
   d. 8-years/80,000 miles

9. All of the following are true statements about catalytic converters EXCEPT:
   a. Three-way converters reduce HC, CO and NOX emissions
   b. Two-way converters reduce HC and NOX emissions
   c. Converter operating efficiency is monitored by a “downstream” O2 sensor
   d. Replacement converters must be the same type as the original

**ANSWER KEY**
1b, 2c, 3a, 4d, 5b, 6b, 7b, 8a, 9b, 10c

Continued on page 80
1. The camshaft in a “pushrod” engine is located where?
   a. Cylinder block
   b. Cylinder head
   c. Crankcase
   d. Manifold

2. Counterman A says a “DOHC” engine has two camshafts if it is a four cylinder, and four cams if it is a V6 or a V8. Counterman B says new lifters should always be used with a new flat tappet camshaft. Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

3. The recommended replacement interval for most timing belts on most late-model OHC engines is:
   a. Every 25,000 miles
   b. Every 60,000 miles
   c. Every 100,000 miles
   d. There is no recommended replacement interval

4. If a timing belt or chain breaks on an “interference” engine, what will happen?
   a. It will prevent an engine from starting
   b. It will cause the engine to stop running
   c. It may bend one or more valves.
   d. All of the above

5. A “wrist pin” does what?
   a. Attaches the crankshaft to the connecting rod
   b. Attaches the connecting rod to the piston
   c. Attaches the camshaft to the timing gear
   d. Attaches the arm bone to the hand bone

6. “Tri-metal” engine bearings have:
   a. A thin layer of babbitt over a layer of copper/lead on a steel shell
   b. A layer of lead over aluminum on a steel shell
   c. Three layers of aluminum on a steel shell
   d. Three layers of lead on an aluminum shell

7. All of the following can be symptoms of a worn oil pump EXCEPT:
   a. Increased oil consumption
   b. Increased valvetrain noise
   c. Low oil pressure
   d. Oil pressure warning light

8. A common problem on late-model engines with Gasoline Direct Injection is:
   a. Increased oil consumption
   b. Oil fouled spark plugs
   c. Carbon buildup on intake valves
   d. All of the above

9. Counterman A says “MLS” (Multi-Layer Steel) head gaskets require a very smooth surface on the head and block to seal properly. Counterman B says a common cause of head gasket failure is engine overheating. Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

10. If a customer is replacing a bad valve lifter in a V8 engine, which type of gaskets will he need?
    a. Head gaskets
    b. Valve cover and intake manifold gaskets
    c. Oil pan gasket
    d. Front cover gasket
1. Which component in the exhaust system is attached to the cylinder head?
   a. Head pipe  
   b. Exhaust pipe  
   c. Exhaust manifold  
   d. Y-pipe

2. Counterman A says front-wheel drive cars may have a “flexible” head pipe to accommodate engine vibrations and twisting motions. Counterman B says “Y-pipes” are only used on four cylinder engines. Who’s right?
   a. Counterman A only  
   b. Counterman B only  
   c. Both Counterman A and B  
   d. Neither one

3. Which of the following is the most dangerous and poisonous pollutant in a vehicle’s exhaust?
   a. Carbon dioxide (CO2)  
   b. Carbon monoxide (CO)  
   c. Oxides of Nitrogen (NOX)  
   d. Hydrocarbons (HC)

4. The catalytic converter is usually located where?
   a. Between the manifold and engine  
   b. Between the manifold and muffler  
   c. Between the muffler and tailpipe  
   d. Between the exhaust pipe and tailpipe

5. How many catalytic converters would a vehicle with a “Y-pipe” likely have in its exhaust system?
   a. One  
   b. Two  
   c. Three  
   d. Four

6. A “universal” replacement muffler may require:
   a. Cutting existing pipes  
   b. Pipe adapters  
   c. New clamps and hangars  
   d. All of the above

7. An “Exact Fit” replacement muffler eliminates the need for:
   a. Clamps  
   b. Heat shields  
   c. Gaskets  
   d. Pipe adapters

8. A “resonator” does what?
   a. Helps reduce emissions  
   b. Helps dampen vibrations  
   c. Helps muffle noise  
   d. Helps reduce backpressure

9. All of the following elements may be used as catalysts inside a three-way catalytic converter EXCEPT:
   a. Titanium  
   b. Platinum  
   c. Palladium  
   d. Rhodium

10. Counterman A says a “cat back” exhaust system usually includes a new Y-pipe, intermediate pipe, muffler and tailpipe. Counterman B says a cracked exhaust manifold can be repaired with a new gasket. Who’s right?
    a. Counterman A only  
    b. Counterman B only  
    c. Both Counterman A and B  
    d. Neither one

**ANSWER KEY**
1c, 2a, 3b, 4b, 5a, 6d, 7d, 8c, 9a, 10d
ASE P2 Quiz: Electrical System

1. A battery’s “CCA” rating refers to what?
   a. How many amps the battery can deliver at 0 degrees F
   b. How many amps the battery can deliver at 32 degrees F
   c. How many amps the battery can deliver at 60 degrees F
   d. How many amps the battery can deliver at 100 degrees F

2. Counterman A says a replacement battery should have the same or better CCA rating as the original battery. Counterman B says a battery’s “group size” depends on the CCA rating of the battery and its post configuration. Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

3. How does an “AGM” battery differ from a wet cell battery?
   a. It uses no lead in its cell plates
   b. It is more sensitive to heat and vibration
   c. It contains no liquid electrolyte
   d. It has no cell separators

4. A gear reduction starter:
   a. Uses gears to reduce friction
   b. Uses gears to reduce cranking speed
   c. Uses gears to increase cranking speed
   d. Uses gears to deliver more cranking torque

5. The magnets inside a permanent magnet starter do what?
   a. Hold the shaft bearings in place
   b. Replace the armature
   c. Replace the field coils
   d. Replace the brushes

6. All of the following are true statements about the alternator EXCEPT:
   a. It produces more voltage at low rpm than high rpm
   b. It maintains battery charge
   c. It provides current for the ignition system and fuel injectors
   d. It provides current for the electrical system and accessories

7. The diodes (rectifier assembly) inside an alternator do what?
   a. Convert DC current to AC
   b. Convert AC current to DC
   c. Regulate charging voltage
   d. Regulate vehicle system voltage

8. Counterman A says a battery should be fully charged before it is installed. Counterman B says bench testing a questionable alternator will confirm if it is good or bad. Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

9. If a replacement fuse has a higher amp rating than the original:
   a. It may create a potential fire hazard
   b. It may cause bulbs to burn brighter
   c. It may cause bulbs to burn dimmer
   d. It may blow as soon as it is installed

10. Counterman A says halogen headlight bulbs should never be touched with bare fingers when replacing the bulb as this may cause the bulb to fail. Counterman B says LED headlights and taillights are more vulnerable to vibration damage than conventional filament bulbs. Who is right?
    a. Counterman A only
    b. Counterman B only
    c. Both Counterman A and B
    d. Neither one

ANSWER KEY
1a, 2a, 3c, 4d, 5c, 6a, 7b, 8c, 9a, 10a
ASE P2 Quiz:
Fuel System

1. A “MAF” sensor does what?
   a. Measures fuel flow
   b. Measures manifold intake vacuum
   c. Measures manifold pressure
   d. Measures airflow

2. Counterman A says a dirty throttle body can cause stalling.
   Counterman B says an engine with “dirty injectors” may perform poorly because the engine is not receiving enough fuel.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

3. The fuel filter is located where in a “returnless” fuel injection system?
   a. Under the vehicle in the fuel supply line
   b. Next to the regulator on the injector supply rail
   c. Inside the fuel tank
   d. A returnless system does not have a filter

4. Injector clogging can be caused by:
   a. Low-quality gasoline
   b. Fuel varnish and carbon deposits
   c. Dirty fuel
   d. Any of the above

5. A fuel filter that is plugged with rust probably indicates what?
   a. Corroded fuel injectors
   b. Corroded carburetor
   c. Corroded fuel pump
   d. Corroded fuel tank

Continued on page 72
ASE P2 Quiz: Fuel System

6. Counterman A says a weak or dead fuel pump is a common cause of engine no-start problems.
   Counterman B says a replacement electric fuel pump for a fuel-injected engine must have the same pressure rating as the original.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

7. Any of the following could prevent an electric fuel pump from operating EXCEPT:
   a. Bad fuel pump relay
   b. Wiring fault in the fuel pump circuit
   c. Open inertia safety switch
   d. Plugged inline fuel filter

8. An “IAC” valve does what?
   a. Controls idle mixture
   b. Controls idle speed
   c. Controls throttle opening
   d. Controls fuel pressure

9. Counterman A says a dirty air filter restricts air flow and can hurt fuel economy and performance.
   Counterman B says panel-style air filters can be flipped over and reused to extend their service life.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

10. Which product should be recommended for removing fuel varnish from a throttle body?
    a. Engine degreaser
    b. Engine top cleaner
    c. Fuel tank injector cleaner additive
    d. Aerosol throttle cleaner

ANSWER KEY
6c, 7d, 8b, 9a, 10d

Can you extend the service life of a panel-style air filter by flipping it over and reusing it?
What does an “orifice tube” do in an A/C system?

1. Counterman A says the the heater control valve regulates the flow of coolant through the heater core.
   Counterman B says all A/C compressors use pistons to pump refrigerant through the A/C system.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

2. All of the following statements about A/C condensers are true EXCEPT:
   a. It is usually located in front of the radiator
   b. It receives high pressure refrigerant gas from the compressor
   c. It cools the air entering the passenger compartment
   d. It cools the refrigerant so the gas will condense into a liquid

3. The magnetic clutch on an A/C compressor:
   a. Traps magnetic particles that might damage the system
   b. Cycles on and off to drive the compressor
   c. Cannot be replaced separately
   d. Contains lubricant for the compressor

4. An “orifice tube” in an A/C system does what?
   a. Regulates the flow of refrigerant into the evaporator
   b. Regulates the flow of refrigerant into the compressor
   c. Regulates the flow of refrigerant into the condenser
   d. Regulates the flow of coolant into the heater core

5. Counterman A says the accumulator should always be replaced if an A/C system has been opened up for repairs.
   Counterman B says a plugged orifice tube is a common cause of compressor failure.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

6. The orifice tube is located where?
   a. At the compressor inlet
   b. At the compressor outlet
   c. Between the compressor and condenser
   d. Between the condenser and evaporator

7. Counterman A says “flushing” an A/C condenser with an approved flushing chemical can remove debris.
   Counterman B says some condensers cannot be flushed because of their design, and must be replaced if contaminated.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

8. Counterman A says vehicles with R134a A/C systems can be recharged with the new R1234yf refrigerant.
   Counterman B says most R134a compressors require a specific type of PAG oil lubricant.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

9. A “variable” orifice tube does what?
   a. Improves low-speed cooling
   b. Improves high-speed cooling
   c. Has no effect on cooling
   d. Filters out contaminants

ANSWER KEY
1a, 2c, 3b, 4a, 5c, 6d, 7c, 8b, 9a

Continued on page 80
1. Which of the following components generates a timing signal for the ignition system?
   a. Crankshaft position sensor
   b. Ignition module
   c. Ignition coil
   d. Rotor

2. Which of the following components would NOT be part of a “distributorless” ignition system (DIS)?
   a. Ignition coil
   b. Rotor
   c. Spark plug wires
   d. Crankshaft position sensor

3. Which of the following components would NOT be part of a “coil-over-plug” (COP) ignition system?
   a. Ignition coil
   b. Spark plug
   c. Spark plug wires
   d. Crankshaft position sensor

4. Counterman A says all spark plugs are pregapped at the factory and require no further adjustments when they are installed.
   Counterman B says long-life spark plugs have platinum or iridium electrodes to reduce wear and extend plug life.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

5. A spark plug’s “heat range” can be determined by:
   a. Its part number
   b. Its length
   c. Its diameter
   d. The number of electrodes

6. All of the following must be the same for replacement spark plugs EXCEPT:
   a. Plug thread size (diameter)
   b. Length of plug threads
   c. Plug seat configuration (flat or beveled)
   d. Plug brand

7. All of the following statements about spark plug wires are true EXCEPT:
   a. Cables should be replaced if resistance exceeds specifications
   b. Cables should be replaced if cracked, worn or damaged
   c. Cables can be replaced individually or in complete sets
   d. Replacement cables must be the same material as the original

8. Which of the following components multiplies battery voltage to create a spark?
   a. Ignition module
   b. Ignition coil
   c. Ignition pickup
   d. Ignition wires

9. Counterman A says a bad crank position sensor may prevent an engine from starting or cause it to suddenly quit running.
   Counterman B says ignition coil output voltage drops as spark plugs wear.
   Who’s right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

10. If the “Check Engine” light is on and there is a cylinder misfire code, which of the following would NOT be a possible cause?
    a. Worn or fouled spark plug
    b. Weak or defective ignition coil
    c. Dirty or dead fuel injector
    d. Bad oxygen sensor
ASE P2 Quiz: Suspension & Steering

1. How many ball joints are in a short-long arm (SLA) front suspension?
   a. Two upper ball joints
   b. Two lower ball joints
   c. Two upper and two lower ball joints
   d. No ball joints

2. How many lower ball joints are in a MacPherson strut front suspension?
   a. One
   b. Two
   c. Four
   d. No ball joints

3. Offset aftermarket ball joints can be used to do what?
   a. Change camber on vehicles that don’t have factory adjustments
   b. Change caster on vehicles that don’t have factory adjustments
   c. Change camber and caster on vehicles that don’t have factory adjustments
   d. Change ride height on vehicles that don’t have factory adjustments

4. Counterman A says “low-friction” ball joints with polymer bushings and polished ball studs are used in most late-model vehicles to reduce friction and steering effort.
   Counterman B says if the “wear indicator” on a ball joint is flush with the housing, it means the joint is new. Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

5. Which of the following components should be replaced if a vehicle’s ride height is below specifications?
   a. Tie rod ends
   b. Ball joints
   c. Control arm bushings
   d. Springs

6. Which of the following components will cause “toe wear” on the tires if worn or loose?
   a. Tie rod ends
   b. Ball joints
   c. Idler arm
   d. Steering rack

7. An “electronic” steering system lacks which of the following components:
   a. Power steering pump
   b. Power steering fluid
   c. Power steering hoses
   d. All of the above

8. Counterman A says gas-charged shocks contain high-pressure gas to help support the vehicle’s weight.
   Counterman B says magnetic shocks and struts can change their dampening characteristics in response to changing road conditions. Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

9. What type of fluid should be used in the power steering system?
   a. Universal power steering fluid
   b. Automatic transmission fluid (ATF)
   c. Special OEM power steering fluid
   d. It varies by application

10. A “unitized” control arm:
    a. Has no bushings
    b. Has no joints
    c. Includes the ball joint as part of the arm
    d. Replaces the idler arm

ANSWER KEY
1c, 2b, 3c, 4a, 5d, 6a, 7d, 8b, 9d, 10c
ASE P2 Review Quiz: Brakes

Continued from 54

9. If the ABS Warning Light is on and remains on:
   a. The brake linings are worn
   b. The ABS system has a fault and is disabled
   c. The parking brake is stuck on
   d. The vehicle has a low tire

10. Counterman A says the return springs and holddown springs should be replaced when drum brakes are relined.
    Counterman B says brake linings should always be replaced if contaminated with brake fluid or grease.
    Who is right?
    a. Counterman A only
    b. Counterman B only
    c. Both Counterman A and B
    d. Neither one

Cooling Systems

Continued from 56

7. “Dex-Cool” antifreeze is what color?
   a. Green
   b. Blue
   c. Orange
   d. Yellow

8. Counterman A says mixing ordinary antifreeze with Dex-Cool does not affect the service life of the coolant.
   Counterman B says the reserve alkalinity of a coolant is a measure of its resistance to freezing.
   Who is right?
   a. Counterman A only
   b. Counterman B only
   c. Both Counterman A and B
   d. Neither one

9. A serpentine belt should be replaced:
   a. If the V-grooves on the underside are worn
   b. If it is contaminated with grease or oil
   c. If it has visible cracks or damage
   d. Any of the above.

10. Counterman A says most “long life” coolants usually have a service life of five to seven years or 100,000 to 150,000 miles.
    Counterman B says failure to change the coolant regularly can cause corrosion inside the radiator, heater core and engine.
    Who is right?
    a. Counterman A only
    b. Counterman B only
    c. Both Counterman A and B
    d. Neither one

Emission Control

Continued from 62

10. Counterman A says “emission hose” is rated to handle oil and fuel vapors.
    Counterman B says “vacuum hose” must be used to route engine vacuum to the EGR valve and other vacuum accessories.
    Who’s right?
    a. Counterman A only
    b. Counterman B only
    c. Both Counterman A and B
    d. Neither one

Heating & A/C

Continued from 74

10. When replacing a compressor, which of the following is recommended?
    a. Replace the orifice tube
    b. Evacuate the A/C system with a vacuum pump before recharging with refrigerant
    c. Replace the accumulator or receiver/drier
    d. All of the above

ANSWER KEY

9b, 10c

7c, 8d, 9d, 10c

10c

10c

10d