

PRACTICE EXAM 20: ASE C1 SIMULATION (50 QUESTIONS)

Recommended time: 75 minutes. Take in one sitting, without notes. Score against the answer key after completion.

1. The federal Magnuson-Moss Warranty Act primarily:

- A. Requires every shop to provide a one-year unlimited mileage warranty on every repair performed nationwide
- B. Restricts the type of repair parts that may be installed in vehicles registered for highway use anywhere
- C. Sets the maximum hourly labor rate that any shop in the country may charge customers for any repair
- D. Governs written warranties on consumer products, including their terms, disclosures, and remedies for failure

2. Excessive negative camber on a vehicle's front wheels typically causes:

- A. Accelerated wear on the inner edge of the front tire's tread compared to the outer edge of the tread
- B. Accelerated wear evenly across the entire tread surface of the front tires from inner edge to outer edge
- C. A wandering steering feel and a tendency for the steering wheel to oscillate at highway cruising speed
- D. A high-pitched squealing sound from the front wheels during normal driving on level paved roads

3. A customer arrives at the service drive without a scheduled appointment. The consultant should:

A. Refuse the customer's request for service entirely and tell them to call back during normal business hours

B. Immediately bypass all scheduled appointments and prioritize the walk-in customer for the next available bay

C. Acknowledge the customer warmly, assess the concern, and explain the realistic options given the current schedule

D. Pretend the customer is not present in the service drive area and continue working with the previously scheduled appointment

4. The engine mounts on a typical passenger vehicle are responsible for:

A. Providing the structural mounting points for the vehicle's bumpers at the front and rear of the body

B. Supporting the engine's weight in the engine bay and isolating engine vibration from the vehicle's body

C. Connecting the engine's crankshaft to the transmission's input shaft through a flexible vibration damper assembly

D. Filtering oil before it returns to the oil pan from the lubrication galleries inside the engine block

5. An "anchor price" sales technique presents the customer with:

A. A single low-cost option with no other options shown for comparison or any other reference for the customer

B. A long list of available services in alphabetical order with no indication of relative pricing for the customer to consider

C. A discount calculation based on the customer's loyalty status and prior visit history with the shop's service department

D. A higher-priced option first, which makes subsequent options appear more reasonable by comparison in the customer's mind

6. Customer testimonials displayed in the shop's lobby or website are most effective when they:

A. Are from real customers, include specific details about the service experience, and represent the shop's typical work accurately

B. Are fabricated by shop staff to make the shop appear more popular than it actually is to potential new customers

C. Are limited to one-sentence quotes that say only "great service" without any details that could be verified by readers

D. Are written exclusively by the shop owner's family members and close friends rather than by actual paying customers

7. The "offset" specification of a wheel describes:

A. The total weight of the wheel including the tire when mounted and inflated to the recommended pressure for the vehicle

B. The distance between the wheel's mounting hub flange and the wheel's centerline, affecting how far the wheel sits in or out

C. The angle at which the wheel sits relative to the road surface when the vehicle is driving on a level paved road

D. The diameter of the wheel measured at the bead seat where the tire's bead contacts the wheel's inner mounting surface

8. A tire marked "P215/65R16" indicates a tire that is:

A. Designed for off-road use only, with the letter P indicating "performance" and the number 65 indicating the load capacity

B. A racing-only tire that should never be installed on a vehicle used on public roads, regardless of vehicle make or model

C. A passenger tire 215 millimeters wide, with a sidewall aspect ratio of 65 percent, of radial construction, on a 16-inch wheel

D. A truck tire 215 inches in diameter, with 65 separate steel belts, of radial construction, rated for highway service only

9. Excessive positive caster on a vehicle's front suspension typically:

A. Increases steering effort at low speeds but improves directional stability at highway speeds and self-centering of the wheel

B. Eliminates the need for any power steering assist on the vehicle, regardless of the vehicle's weight or driving conditions

C. Causes the front tires to wear on the outer edge identically to excessive positive camber on the same front suspension

D. Locks the steering wheel in the centered position whenever the vehicle is in motion, preventing all driver steering input

10. Sway bar end links connect:

A. The sway bar to the vehicle's frame through a rigid steel rod that does not allow any movement during cornering

B. The sway bar to the brake caliper at each wheel position, transferring brake force to the suspension during stops

C. The sway bar to the wheel hub directly, eliminating the need for any control arms or other suspension components

D. The sway bar to a suspension component (typically the strut or control arm) at each side, transmitting body roll forces

11. EPA Section 609 certification is required for any technician who:

A. Performs any oil change service on a passenger vehicle for a customer paying for the service

B. Purchases, handles, or services motor vehicle air conditioning refrigerants under federal Clean Air Act provisions

C. Diagnoses any engine driveability concern that produces a diagnostic trouble code stored in the engine control module

D. Performs welding repairs on vehicle exhaust systems above a specified pipe diameter at the customer's request

12. An "idle relearn" procedure after disconnecting the battery on certain vehicles is necessary because:

A. The engine cannot be started after a battery disconnect unless the relearn procedure is completed before cranking

B. The vehicle's fuel level reading is reset to zero whenever the battery is disconnected and requires manual recalibration

C. The engine control module loses its learned idle speed and air-fuel adjustments and must relearn them on the next startup

D. The vehicle's odometer reading is reset to zero whenever the battery is disconnected and must be reentered by a technician

13. A voltage drop test on an automotive electrical circuit measures:

A. The voltage lost across a wire, connector, or load while current is flowing, helping to identify high-resistance points

- B. The total amperage flowing through the circuit with no load connected, indicating the available current from the battery
- C. The frequency at which the circuit oscillates during normal vehicle operation, expressed in cycles per second
- D. The total resistance of every component in the circuit added together, measured in ohms with the circuit de-energized

14. A continuity test using a digital multimeter is used to verify:

- A. The current flowing through a circuit while it is energized at full operating load on the vehicle in question
- B. The voltage available at the battery terminals during cold cranking at low ambient temperature conditions
- C. The frequency of the alternator's output during normal driving conditions on a vehicle equipped with a regulated charging system
- D. The presence of an unbroken electrical path between two points in a circuit, typically with the circuit de-energized

15. A parasitic draw test on a vehicle's electrical system is performed to:

- A. Measure the maximum current draw of the starter motor during a typical cold engine cranking attempt at low temperatures
- B. Verify the alternator's output current at the highest electrical load the vehicle is rated to support during normal driving
- C. Identify excessive current draw from the battery when the vehicle is parked and all systems are supposed to be off
- D. Calculate the total energy consumed by the vehicle's electrical loads during a continuous one-hour highway driving cycle

16. Short-term fuel trim (STFT) displayed on a scan tool indicates:

- A. The total fuel consumption of the vehicle in gallons since the last reset of the trip odometer by the driver
- B. The current real-time correction the engine control module is making to fuel delivery based on oxygen sensor feedback
- C. The age of the fuel in the tank measured in days since the customer last filled up the vehicle with gasoline
- D. The amount of fuel pressure produced by the high-pressure pump on a gasoline direct-injection equipped engine

17. Long-term fuel trim (LTFT) differs from short-term fuel trim in that LTFT:

- A. Represents a learned average correction stored over time, reflecting persistent deviations from the base fuel calibration
- B. Updates faster than short-term fuel trim and responds to instantaneous changes in air-fuel ratio during driving
- C. Measures fuel level in the tank only and has nothing to do with the engine control module's adjustments to injectors
- D. Is used only on diesel engines and provides no useful diagnostic information for gasoline-powered passenger vehicles

18. Bidirectional control using a scan tool allows the technician to:

- A. Read diagnostic trouble codes from the vehicle's engine control module in both standard and manufacturer-specific formats
- B. Command vehicle components (relays, actuators, motors) to operate from the scan tool to test their function during diagnosis

C. Communicate with another technician's scan tool simultaneously to compare diagnostic results across two different vehicles

D. Print the diagnostic results to a wireless printer in either landscape or portrait orientation for the customer's records

19. The manifold absolute pressure (MAP) sensor on a modern engine measures:

A. The pressure of the engine oil in the lubrication galleries during operation at idle and at full engine speed

B. The pressure of the brake hydraulic system at the master cylinder when the driver presses the brake pedal firmly

C. The absolute pressure inside the intake manifold, used by the engine control module to calculate engine load

D. The pressure of the exhaust gas at the catalytic converter during peak engine power output at full throttle

20. On a typical gasoline engine at idle, a healthy intake manifold vacuum reading is generally in the range of:

A. 5 to 10 inches of mercury (inHg), with anything above this range indicating a serious internal engine fault

B. 17 to 22 inches of mercury (inHg) at sea level, varying slightly with altitude and engine specification details

C. 35 to 40 inches of mercury (inHg), produced only by engines equipped with positive crankcase ventilation

D. Zero, since intake manifold vacuum is present only during engine overrun and not during normal idle operation

21. A memory saver tool connected during a battery disconnect is used to:

- A. Maintain low-current power to the vehicle's modules and accessories so that learned data and presets are not lost
- B. Charge the vehicle's battery at a fast rate while the battery is disconnected from the vehicle's electrical system
- C. Test the battery's cold cranking amps rating while the battery is removed from the vehicle's engine bay
- D. Calibrate the vehicle's electronic clock by setting it to a satellite time reference signal from a GPS receiver

22. A wheel's "bolt pattern" or "lug pattern" is expressed as:

- A. The diameter of each lug nut in millimeters multiplied by the total number of lug nuts that secure the wheel
- B. The torque specification in foot-pounds for each lug nut at the manufacturer's recommended tightening sequence
- C. The number of lug holes followed by the diameter of the imaginary circle on which the lug centers fall (e.g., 5x114.3 mm)
- D. The thread pitch of each lug stud in millimeters multiplied by the diameter of the threaded portion of the stud

23. A Schrader valve in a tire's valve stem is responsible for:

- A. Releasing tire pressure automatically whenever the tire reaches a temperature above 150 degrees Fahrenheit on the road
- B. Communicating tire pressure readings wirelessly to the vehicle's tire pressure monitoring system through a built-in transmitter
- C. Filtering air entering the tire to remove dust and moisture during inflation at a service station or home compressor

D. Sealing the air inside the tire while allowing air to be added through the valve's center pin when pressed during inflation

24. Tire chains or cables used in winter conditions should be:

A. Installed only on the rear axle of every vehicle regardless of drive configuration, with no adjustment after install

B. Installed on the drive wheels and used in accordance with local regulations and the vehicle manufacturer's instructions

C. Installed on all four wheels at all times during the winter months even when no snow or ice is present on the roads

D. Replaced with year-round all-terrain tires that eliminate the need for any seasonal traction device on the vehicle

25. Dedicated winter (snow) tires differ from all-season tires primarily in that winter tires:

A. Are required by federal regulation to be installed on every vehicle registered in any northern U.S. state during cold months

B. Use the same tread compound as all-season tires but are sold in larger sizes for additional traction on snow-covered roads

C. Use a softer rubber compound that remains flexible at low temperatures and a tread pattern designed for snow and ice traction

D. Should never be used on dry pavement because the tread compound will dissolve within hours of contact with warm asphalt

26. The cabin air filter on most modern passenger vehicles is located:

- A. Behind or near the glove box, inside the HVAC housing where it filters air entering the cabin from the system
- B. Inside the engine air intake duct between the air filter box and the throttle body on the front of the engine
- C. Beneath the vehicle's body, mounted to the frame near the rear axle for protection from interior dust and damage
- D. Inside the engine's oil pan, where it filters the engine oil after it returns from the lubrication galleries during operation

27. A control arm (or A-arm) in a vehicle's suspension is responsible for:

- A. Storing brake fluid for the master cylinder and routing it to each individual wheel cylinder during normal braking
- B. Pumping engine coolant through the cooling system passages when the water pump fails to circulate the fluid
- C. Generating the spark that ignites the air-fuel mixture in each cylinder during the engine's power stroke
- D. Locating the wheel relative to the chassis and pivoting on bushings to allow controlled vertical wheel movement

28. An independent rear suspension (IRS) differs from a solid (live) rear axle in that the IRS:

- A. Always provides a smoother ride than a solid axle in every driving condition encountered on the road
- B. Allows each rear wheel to move vertically independently of the other, improving handling and ride on uneven surfaces
- C. Eliminates the need for any rear shock absorbers or springs in the vehicle's overall suspension design layout
- D. Connects the rear wheels rigidly together at all times, even during cornering and over uneven road surfaces

29. A weak or corroded engine ground connection can produce symptoms including:

- A. The vehicle's fuel economy improving over time as the engine adjusts to the higher resistance in the ground path
- B. The vehicle's automatic transmission shifting smoother than normal during all driving conditions and gear changes
- C. Erratic electrical behavior such as flickering lights, hard starting, communication errors, and unusual computer behavior
- D. The vehicle's brakes becoming significantly more powerful during normal stops than before the ground problem developed

30. The U.S. Environmental Protection Agency requires shops handling refrigerant to:

- A. Vent recovered refrigerant to the atmosphere through a properly installed roof vent during normal service operations
- B. Dispose of all refrigerant in the regular solid-waste dumpster behind the shop along with any used motor oil filters
- C. Mix recovered refrigerant with engine coolant before transferring the combined fluid to the shop's waste oil tank
- D. Recover, recycle, or reclaim refrigerant using EPA-certified equipment, with technicians holding Section 609 certification

31. Used motor oil collected by an automotive shop is generally regulated as:

- A. Hazardous or universal waste, requiring collection in dedicated tanks and removal by approved waste handlers
- B. General solid waste, which may be disposed of in the shop's regular trash collection without restriction

C. Recyclable plastic, which may be commingled with the shop's bottle and can recycling at no additional cost

D. Untreated wastewater, which may be discharged to the local sanitary sewer through any available drain in the shop

32. I-CAR (Inter-Industry Conference on Auto Collision Repair) provides training and certification primarily for:

A. The technicians working in heavy diesel truck repair facilities serving the long-haul trucking industry

B. The marine and motorcycle repair industry, with no relevance to passenger vehicle service operations

C. Engine performance and emissions diagnostics, supplementing the ASE A6 and L1 certification programs offered nationally

D. The collision repair industry, covering structural, mechanical, and refinish disciplines for damaged vehicle restoration

33. ASE (Automotive Service Excellence) certifications must generally be renewed:

A. Every twelve months by paying an annual fee with no testing requirement to maintain the credential indefinitely

B. Only once during the technician's career, since ASE certification is considered a lifetime credential with no expiration

C. Every five years by passing a recertification test that verifies the technician's continued knowledge and currency

D. Every six months by completing a fixed number of manufacturer-specific training hours at the technician's expense

34. The ASE L1 (Advanced Engine Performance Specialist) certification:

- A. Is an advanced credential requiring the A6 (Electrical) and A8 (Engine Performance) certifications as prerequisites to take
- B. Replaces the A series certifications entirely once the technician passes the L1 examination at any testing center
- C. Is required by federal law for any technician performing engine repair work in any state of the United States
- D. Applies only to diesel engine performance and has no relevance to gasoline-powered vehicle diagnosis at any level

35. A customer arrives at the shop accompanied by a service animal. The consultant should:

- A. Refuse to write up the service request and require the customer to leave the service animal outside the shop's building
- B. Welcome the customer and the service animal, follow the shop's policies on accommodating service animals, and proceed normally
- C. Demand documentation proving the animal is a certified service animal before allowing the customer into the lobby area
- D. Charge the customer an additional fee equal to the standard diagnostic rate for the inconvenience the animal might create

36. A customer arrives at the service drive showing clear signs of intoxication (impaired speech, unsteady balance, smell of alcohol). The consultant should:

- A. Refuse to acknowledge the customer and walk away from the situation entirely until the customer leaves the shop
- B. Provide the customer with information about local public transportation but proceed normally with the service write-up
- C. Process the customer's request quickly so that the customer can leave the shop's premises as soon as possible

D. Avoid releasing a vehicle to the impaired customer, offer to call a ride or contact a designated alternate driver, and document carefully

37. A customer brings young children to the service write-up. The consultant should:

A. Refuse service until the children are removed from the shop's lobby area completely under any circumstances

B. Address all questions and decisions directly to the children, even when the parent is the registered vehicle owner

C. Be welcoming to the family, ensure the lobby area is safe, and direct all decisions to the parent for authorization

D. Hand the children candy from a personal supply to keep them quiet during the write-up conversation with the parent

38. A spouse of the registered vehicle owner calls to authorize a repair on the owner's behalf. The consultant should:

A. Accept the verbal authorization without any further verification, since spouses typically share vehicle ownership in practice

B. Verify the spouse's authority to authorize work, document the conversation, and confirm with the registered owner when possible

C. Refuse to discuss the vehicle in any way with the spouse, since only the registered owner may receive vehicle information

D. Quote a much higher price to the spouse than the original estimate, since spouses are typically less likely to dispute the charge

39. A customer arrives at the service drive ten minutes before the shop's posted closing time with a vehicle concern. The consultant should:

- A. Refuse to acknowledge the customer and lock the doors immediately at the posted closing time to send a clear message
- B. Process the full repair start-to-finish before the staff leaves for the day regardless of how long it will actually take
- C. Tell the customer the shop is closed and direct them to a competitor location without any further discussion or guidance
- D. Greet the customer professionally, briefly assess the concern, and offer realistic next steps within the shop's policies for the situation

40. A customer presents a written estimate from a competing shop and asks the consultant to match the price. The consultant should:

- A. Review the competing estimate, confirm the scope of work matches, and discuss the shop's pricing approach with the customer
- B. Match the competing price immediately without verification, since the customer's request is final and binding on the shop
- C. Refuse to look at the competing estimate at all and tell the customer to do business with the other shop instead
- D. Triple the competing price to demonstrate that the shop's superior quality cannot be matched at the competitor's low rate

41. A repair financing program offered to customers typically:

- A. Charges no interest to the customer for any repair amount, with no requirement for the customer to repay the loan
- B. Requires the shop to pay a fixed annual subscription fee, but eliminates all customer credit verification steps from the process
- C. Provides the customer with a third-party credit line that pays the shop directly while the customer repays the lender over time

D. Replaces the customer's existing auto insurance coverage with the shop's own internal warranty program for all future repairs

42. A customer wishing to use the shop's financing partner must typically:

A. Receive an instant approval with no credit check, since shop financing programs do not require any financial verification

B. Complete an application with the financing partner that includes a credit check, with the approval decision controlled by the lender

C. Provide three forms of government-issued identification and proof of homeownership before any application can be processed

D. Pay the shop a non-refundable application fee equal to fifty percent of the repair estimate, with no guarantee of approval

43. The service manager's role in mentoring a service consultant typically includes:

A. Performing all of the consultant's daily tasks directly so that the consultant can observe and replicate the manager's actions exactly

B. Setting unrealistic sales targets that the consultant must meet under threat of termination during the first ninety days on the job

C. Excluding the consultant from any customer interactions until the consultant has completed three years of unrelated experience

D. Providing coaching on customer interactions, sales technique, and product knowledge, with regular feedback on observed performance

44. An apprentice technician differs from an ASE-certified technician in that the apprentice:

- A. Has greater knowledge and experience than an ASE-certified technician, since apprenticeship is a more advanced credential
- B. Is typically learning the trade under the supervision of more experienced technicians and has not yet completed ASE certification
- C. Performs all work without any supervision, since apprentices are legally permitted to operate as fully qualified technicians
- D. Specializes only in heavy commercial vehicles and is prohibited by federal regulation from working on passenger vehicles

45. "Garage keepers" insurance carried by a shop is intended to:

- A. Cover damage to customer vehicles while the vehicles are in the shop's care, custody, or control during a service visit
- B. Cover the personal property of the shop's owners and employees stored at their personal homes outside of business hours
- C. Cover the shop owner's investments in mutual funds and stocks held outside of the shop's regular business accounts
- D. Cover only catastrophic events such as floods and earthquakes that damage the shop's building structure during major storms

46. Customer record privacy laws governing automotive shops in many jurisdictions require the shop to:

- A. Publish the customer's full name and vehicle service history on the shop's public website as a transparency measure
- B. Disclose the customer's contact information to any third party who calls and claims to be a family member of the customer
- C. Protect customer personal information from unauthorized access, use, or disclosure under applicable state and federal privacy laws

D. Sell the customer's personal information to marketing companies as a way to generate additional revenue for the shop's owners

47. A customer who has opted out of the shop's marketing communications should:

A. Receive marketing communications even more frequently, since their opt-out indicates a need for additional outreach

B. Be removed from the customer database entirely and prohibited from receiving any future service at the shop's facility

C. Be charged a higher labor rate than other customers, since their opt-out reduces the shop's ability to communicate offers

D. Be removed from marketing lists but remain eligible for service-essential communications such as appointment reminders

48. A signed photo release form obtained from a customer is required before the shop may:

A. Use photos of the customer or their vehicle on the shop's website, social media, or in any promotional materials

B. Take photos of the vehicle's pre-existing condition at write-up for internal documentation purposes by the shop

C. Provide photos of the customer's vehicle to the customer themselves upon request for the customer's records

D. Take diagnostic photos of components on the vehicle for use in explaining recommendations to the customer during the visit

49. A shop's daily deposit procedure for cash and check payments collected typically requires:

- A. Storing all cash in the consultant's personal vehicle overnight until the next business day's bank opening time
- B. Sending all daily cash receipts home with the shop owner each evening for personal safekeeping until deposit
- C. Reconciling the day's receipts against transactions, securing the funds, and depositing them in the shop's bank account daily
- D. Mailing the cash to the shop's bank in a standard envelope through the regular postal service for next-day deposit handling

50. A shop's workers' compensation insurance is intended to:

- A. Provide medical and wage replacement benefits to employees who are injured in the course of performing their job duties
- B. Cover the shop's costs of advertising and marketing services to attract new customers to the shop's facility
- C. Reimburse customers for any inconvenience caused by extended repair times that delay the return of their vehicles
- D. Pay the shop owner's personal living expenses during periods when the shop is closed due to a temporary business interruption

ANSWER KEY (Practice Exam 20)

- 1. D** — The federal Magnuson-Moss Warranty Act governs written warranties on consumer products, including required terms, disclosures, and remedies when a product or repair fails to meet warranty obligations. It does not set mandatory warranty terms for all shops, restrict parts, or cap labor rates.
- 2. A** — Excessive negative camber tilts the wheel so the inner edge of the tread bears more load than the outer edge, accelerating wear on the inner edge specifically. Even wear, wandering steering, and squealing are not the characteristic wear pattern of a camber error.
- 3. C** — A walk-in customer should be greeted warmly, the concern assessed briefly, and realistic options explained given the current schedule — work in the same day, schedule the next available appointment, or referral if appropriate. Refusing, ignoring, or displacing scheduled appointments all fail either the walk-in or the existing customers.

- 4. B** — Engine mounts support the engine's weight in the engine bay and isolate engine vibration from the vehicle's body and frame through internal rubber or hydraulic damping elements. Worn mounts allow excessive engine movement and transmit vibration into the cabin.
- 5. D** — An anchor price presents a higher-priced option first so that subsequent lower-priced options appear more reasonable by comparison. This cognitive bias makes the customer perceive better value in mid-range or basic options once a high anchor is established.
- 6. A** — Effective customer testimonials are from real customers, include specific details about the service experience, and represent the shop's typical work accurately. Fabricated, vague, or family-only testimonials damage credibility and create legal exposure.
- 7. B** — Wheel offset is the distance between the wheel's mounting hub flange and the wheel's centerline, expressed in millimeters as positive (flange outboard of center) or negative. Offset affects how far the wheel sits in or out of the wheel well and influences clearance and handling.
- 8. C** — In the designation P215/65R16, "P" indicates passenger, "215" is section width in millimeters, "65" is the aspect ratio (sidewall height as a percentage of width), "R" is radial construction, and "16" is the wheel diameter in inches. Each character has a defined meaning under the standardized tire sizing system.
- 9. A** — Excessive positive caster increases steering effort at low speeds because the steering axis is tilted further rearward, but it improves directional stability and self-centering at highway speeds. This is why high-caster setups are common on cars optimized for high-speed cruising.
- 10. D** — Sway bar end links connect the sway bar to a suspension component (typically the strut or control arm) at each side, transmitting body roll force from one side of the suspension to the other through the bar's torsional stiffness. Worn end links clunk and reduce sway bar effectiveness.
- 11. B** — EPA Section 609 certification under the Clean Air Act is required for any technician who purchases, handles, or services motor vehicle air conditioning (MVAC) refrigerants. The certification ensures the technician understands recovery and recycling requirements to protect the ozone layer and climate.
- 12. C** — On vehicles with adaptive idle control, the engine control module loses its learned idle speed and air-fuel adjustments when battery power is removed, and the ECM must relearn these adaptations during the next several startup and drive cycles. The vehicle will start without the relearn, but idle quality may be poor until relearning completes.
- 13. A** — A voltage drop test measures the voltage lost across a wire, connector, or load while current is flowing, helping the technician identify high-resistance points such as corroded connections or damaged conductors. Testing under load is essential because resistance often appears only when current flows.
- 14. D** — A continuity test verifies the presence of an unbroken electrical path between two points in a circuit, typically performed with the circuit de-energized and the meter set to the continuity or low-ohms range. It is the fastest way to confirm wire integrity from end to end.

- 15. C** — A parasitic draw test identifies excessive current draw from the battery when the vehicle is parked and all systems are supposed to be off, isolating which circuit or module is keeping the battery awake and draining it. Normal parasitic draw is typically below 50 milliamps after the modules go to sleep.
- 16. B** — Short-term fuel trim displays the engine control module's current real-time correction to fuel delivery based on oxygen sensor feedback, expressed as a positive (adding fuel) or negative (subtracting fuel) percentage. It responds quickly to instantaneous changes in conditions.
- 17. A** — Long-term fuel trim represents a learned average correction stored over time, reflecting persistent deviations from the base fuel calibration that the short-term trim has repeatedly had to correct. High LTFT values indicate a chronic fueling issue such as a vacuum leak or weak fuel pump.
- 18. B** — Bidirectional control allows the technician to command vehicle components — relays, actuators, solenoids, motors — to operate directly from the scan tool, isolating whether a non-functional component is the part itself, the wiring, or the controlling module. It is one of the most powerful diagnostic capabilities in modern scan tools.
- 19. C** — The MAP sensor measures the absolute pressure inside the intake manifold, and the engine control module uses this reading (often combined with engine speed) to calculate engine load and adjust fuel delivery and timing. It is the speed-density alternative to MAF-based engine management.
- 20. B** — A healthy gasoline engine at idle at sea level typically pulls 17 to 22 inches of mercury (inHg) of intake manifold vacuum, varying with altitude and engine specification. Low readings indicate problems such as worn rings, leaking valves, vacuum leaks, or restricted exhaust.
- 21. A** — A memory saver tool maintains low-current power to the vehicle's modules and accessories during a battery disconnect so that learned idle, transmission shift, radio presets, and module configurations are not lost. It is typically connected through the OBD-II port or a power outlet.
- 22. C** — A wheel's bolt pattern is expressed as the number of lug holes followed by the diameter of the imaginary circle on which the lug centers fall, such as 5x114.3 mm or 5x4.5 inches. The pattern must match the vehicle's hub for the wheel to bolt up correctly.
- 23. D** — A Schrader valve seals the air inside the tire while allowing air to be added through the valve's center pin when pressed by an inflation chuck or pressure gauge. It is the same valve type used on most car and truck tires worldwide.
- 24. B** — Tire chains or cables should be installed on the drive wheels and used in accordance with local regulations and the vehicle manufacturer's instructions, including clearance and speed limits. Improper use can damage the vehicle's suspension, brakes, or fenders.
- 25. C** — Dedicated winter tires use a softer rubber compound that remains flexible at low temperatures, combined with a tread pattern (deeper grooves, biting edges, siping) designed for traction on snow and ice. All-season tires harden in cold weather and cannot match this performance.

- 26. A** — The cabin air filter on most modern passenger vehicles is located behind or near the glove box, inside the HVAC housing where it filters air entering the cabin from the ventilation system. Some vehicles place it under the dashboard or in the cowl.
- 27. D** — A control arm locates the wheel relative to the chassis and pivots on bushings at one end and the steering knuckle (via ball joint) at the other, allowing controlled vertical wheel movement during suspension travel. It is the structural backbone of independent suspension designs.
- 28. B** — An independent rear suspension allows each rear wheel to move vertically independently of the other, improving handling, ride quality, and tire contact on uneven surfaces. A solid rear axle connects the two wheels rigidly, transmitting movement from one to the other.
- 29. C** — A weak or corroded engine ground connection causes erratic electrical behavior such as flickering lights, hard starting, communication errors between modules, and unusual computer behavior, because all electrical circuits depend on the ground path to complete. Cleaning and tightening ground connections is a foundational diagnostic step.
- 30. D** — The EPA requires shops handling refrigerant to recover, recycle, or reclaim refrigerant using EPA-certified equipment, with technicians holding Section 609 certification. Venting refrigerant to the atmosphere is prohibited under the Clean Air Act.
- 31. A** — Used motor oil is generally regulated as hazardous or universal waste, requiring collection in dedicated tanks and removal by approved waste handlers. Disposing of used oil in regular trash, recycling streams, or drains violates federal and state environmental laws.
- 32. D** — I-CAR (Inter-Industry Conference on Auto Collision Repair) provides training and certification for the collision repair industry, covering structural, mechanical, and refinish disciplines for damaged vehicle restoration. It is the recognized standard for collision repair training.
- 33. C** — ASE certifications must be renewed approximately every five years by passing a recertification test that verifies the technician's continued knowledge of current technology and procedures. Without renewal, the certification lapses and the technician is no longer ASE-certified in that area.
- 34. A** — The ASE L1 (Advanced Engine Performance Specialist) certification is an advanced credential that requires the A6 (Electrical/Electronic Systems) and A8 (Engine Performance) certifications as prerequisites to take. It tests the integration of diagnostic skills across multiple engine systems.
- 35. B** — A service animal accompanying a customer must be welcomed in accordance with the Americans with Disabilities Act and the shop's policies on service animals, with the visit proceeding normally. Refusing, demanding documentation beyond what is permitted, or charging extra fees are all violations of ADA requirements.
- 36. D** — When a customer arrives showing clear signs of intoxication, the consultant should avoid releasing a vehicle to the impaired customer, offer to call a ride or contact a designated alternate driver, and document the interaction carefully. Releasing a vehicle to an impaired driver creates liability and serious safety risk.

37. C — Families with young children should be welcomed, the lobby area kept safe and orderly, and all service decisions directed to the parent for authorization. Refusing service, addressing children as decision-makers, or unilaterally offering candy are inappropriate.

38. B — When a spouse calls to authorize a repair on behalf of the registered owner, the consultant should verify the spouse's authority to authorize work, document the conversation, and confirm with the registered owner when possible. Authorization legally rests with the owner, not the spouse, unless joint ownership or a power of attorney is established.

39. D — A customer arriving close to closing should be greeted professionally, the concern briefly assessed, and realistic next steps offered within the shop's policies — whether quick triage today, a tow arrangement, or a confirmed appointment for the next day. Ignoring, overpromising, or dismissing the customer all damage the relationship.

40. A — When a customer presents a competing estimate, the consultant should review the competing estimate, confirm the scope of work matches the shop's recommendation, and discuss the shop's pricing approach openly with the customer. Matching blindly, refusing to engage, or inflating the price all fail the customer's reasonable request.

41. C — A repair financing program provides the customer with a third-party credit line that pays the shop directly while the customer repays the lender over time, often with promotional interest terms for a specified period. The shop is not the lender and does not assume the customer's credit risk.

42. B — Customers using a shop's financing partner must typically complete an application that includes a credit check, with the approval decision controlled by the lender, not the shop. Instant approvals, additional documentation requirements, and application fees are not standard features of typical programs.

43. D — The service manager's mentoring role includes providing coaching on customer interactions, sales technique, and product knowledge, with regular feedback on observed performance. Doing the consultant's job, setting punitive targets, or excluding from customer contact all fail the development purpose.

44. B — An apprentice technician is typically learning the trade under the supervision of more experienced technicians and has not yet completed ASE certification in any specialty. Apprentices work alongside qualified technicians and gradually build skills toward independent qualification.

45. A — Garage keepers insurance covers damage to customer vehicles while they are in the shop's care, custody, or control during a service visit, protecting the shop from loss claims when a customer vehicle is damaged on the premises. It is a standard policy for automotive service operations.

46. C — Customer record privacy laws require the shop to protect customer personal information from unauthorized access, use, or disclosure under applicable state and federal privacy laws. Publishing, disclosing freely to third parties, or selling customer data all violate these protections.

47. D — A customer who has opted out of marketing communications should be removed from marketing lists but remain eligible for service-essential communications such as appointment reminders, recall

notices, and safety advisories. Opting out applies to promotional content, not to communications necessary to service the relationship.

48. A — A signed photo release form is required before the shop may use photos of the customer or their vehicle on the shop's website, social media, or in any promotional materials. Internal documentation, customer-requested photos, and diagnostic photos for explanation do not require this release.

49. C — A shop's daily deposit procedure typically requires reconciling the day's receipts against transactions, securing the funds, and depositing them in the shop's bank account daily to reduce theft, robbery, and cash-handling risk. Vehicle storage, personal safekeeping, and mailing are all inappropriate.

50. A — Workers' compensation insurance provides medical and wage replacement benefits to employees who are injured in the course of performing their job duties, protecting both the employee and the employer from financial loss after a workplace injury. It is mandatory in most states for employers above a minimum size.