

PRACTICE EXAM 15

1. A shop is setting up a dedicated ADAS calibration area. Which floor characteristic is most essential for accurate static calibrations?

- A. A floor finished with a high-gloss reflective epoxy coating
- B. A floor marked with brightly colored alignment grid lines
- C. A floor that is flat and level within the specified tolerance
- D. A floor sloped slightly toward a central drain for runoff

2. A technician retrieves a code for "lost communication" with the left rear corner radar. Knowing this module's role, the technician understands that this fault may also affect:

- A. The forward-facing camera's traffic sign recognition function
- B. The ultrasonic park assist sensors mounted in the front bumper
- C. The instrument cluster brightness and gauge sweep at startup
- D. ADAS CAN bus communication for which this module is primary

3. Before a forward camera static calibration, the vehicle's geometry must be established. Which references define that geometry?

- A. The odometer reading and the engine hours stored in memory
- B. The vehicle's thrust line and centerline geometric references
- C. The radar transmit frequency and the ultrasonic firmware level
- D. The battery state of charge and the coolant temperature value

4. A vehicle's ride height is below specification due to sagging springs. Before calibrating, the technician must:

- A. Correct the ride height so sensor aim matches the reference

- B. Increase the radar sensitivity to compensate for the low stance
- C. Reflash the camera module to a lowered-vehicle calibration file
- D. Disable the ultrasonic sensors until the springs are replaced

5. A scan tool shows the forward radar communicating normally but reporting targets at implausible distances after a minor collision. This most strongly suggests:

- A. The private CAN terminating resistor has failed in an open state
- B. The radar's physical aim or mounting was disturbed in the impact
- C. The instrument cluster module lost its stored ACC configuration
- D. The ultrasonic park assist controller requires reinitialization

6. Which feature relies primarily on the forward-facing camera rather than radar?

- A. Reading posted speed limit signs along the roadway ahead
- B. Maintaining a set following distance behind a lead vehicle
- C. Warning of a vehicle present in the adjacent blind spot zone
- D. Alerting to cross traffic while the vehicle is backing up

7. A pre-scan and post-scan are both part of a proper ADAS repair. The post-scan specifically serves to:

- A. Confirm codes are resolved and no new faults were introduced
- B. Document the pre-existing codes present before any repair work
- C. Raise the system voltage required to begin the calibration
- D. Establish the vehicle's thrust line before target placement

8. A medium-range forward radar is specified at roughly 0–160 meters. This range makes it suitable for:

- A. Close-range parking maneuvers within one meter of an obstacle

- B. Forward detection for adaptive cruise and collision warning
- C. Reading lane markings to support the lane keep assist feature
- D. Recognizing posted speed limit signs at highway distances

9. A dynamic camera calibration will not complete. The technician confirms the camera is clean and initialized. Which road condition would most directly prevent completion?

- A. Faded or poorly visible lane markings along the test route
- B. A test route with brightly painted and freshly marked lanes
- C. A route that allows the required speed to be easily sustained
- D. Clear, dry weather with good visibility throughout the drive

10. When the ignition is cycled from ON to OFF and back, the Composite Vehicle's ACC system defaults to:

- A. A permanently disabled state requiring a scan tool to reset it
- B. A locked-out state below a 45 mph minimum activation speed
- C. Whatever custom following-distance setting was last selected
- D. The ON state when the ignition is cycled back to the on position

11. A technician needs to disable an ADAS feature for a road test. The Composite Vehicle allows this through:

- A. Pulling the dedicated ADAS fuse from the underhood fuse box
- B. Disconnecting the forward camera's electrical connector by hand
- C. The ADAS control panel switch located inside the vehicle cabin
- D. A factory scan tool session authorized by the manufacturer

12. A vehicle equipped with adaptive cruise control has its following distance adjusted by the driver using:

- A. A rotary dial mounted on the lower left dashboard trim
- B. The instrument cluster module (ICM) interface in the dash
- C. A handheld scan tool connected at the diagnostic connector
- D. A center console touchscreen within the stack assembly

13. A blind spot warning works correctly. It alerts the driver specifically when:

- A. The forward radar detects a stopped object in the travel path
- B. A vehicle occupies the blind spot zone in an adjacent rear lane
- C. The following distance to a lead vehicle exceeds 160 meters
- D. The transmission is placed into reverse gear at any road speed

14. Each rear corner radar contains a 120-ohm resistor. On the private CAN bus, this resistor's role is to:

- A. Terminate the bus correctly to prevent signal reflections
- B. Reduce battery supply voltage feeding the radar emitter
- C. Convert the analog radar return into a digital distance value
- D. Filter image noise originating from the forward camera feed

15. A module receives supply voltage from the battery and switched voltage from the ignition. This dual feed means the module:

- A. Operates entirely on the camera's regulated five-volt reference
- B. Functions only when the private CAN resistor is disconnected
- C. Requires both sources to be present for normal operation
- D. Raises its transmit frequency whenever the ignition is off

16. A forward radar mounts to a bracket behind the fascia. The reference states the bracket and module are:

- A. Welded together permanently and replaced only as one unit
- B. Aimed automatically by the module with no physical step
- C. Serviced separately as distinct, replaceable components
- D. Calibrated solely through a dynamic road test procedure

17. A customer's rear cross traffic alert never warns when reversing out of a parking space. The most likely direct cause is:

- A. A rear corner radar that is obstructed, misaimed, or not communicating
- B. A forward-facing camera lens lightly fogged during a cold start
- C. An adaptive cruise following distance set to its maximum value
- D. An instrument cluster brightness setting adjusted too low to read

18. The ultrasonic sensors on the Composite Vehicle are best described as providing:

- A. A long-range input that drives the adaptive cruise control system
- B. A lane-marking input used by the lane keep assist function
- C. A traffic-sign input feeding the speed limit display feature
- D. A close-range input analyzed for use by the ADAS system

19. A windshield is replaced on a vehicle with a glass-mounted forward camera. The required service afterward is:

- A. An initialization of the rear ultrasonic park assist sensors
- B. A static or dynamic recalibration of the forward-facing camera
- C. A replacement of both rear corner radar mounting brackets
- D. A reflash of the powertrain control module operating software

20. A technician must determine whether a sensor needs static or dynamic calibration. The decision is governed by:

- A. The available floor space within the calibration service bay
- B. The ambient outdoor temperature on the day of the service
- C. The state of charge of the vehicle's main starting battery
- D. The manufacturer's specified procedure for that sensor

21. Several ADAS modules report "no communication" while the engine and transmission modules respond normally. This pattern points to:

- A. A single failed ultrasonic sensor element within the rear bumper
- B. An obstructed forward camera lens covered by accumulated debris
- C. An internal processor failure inside the powertrain control module
- D. A fault in the ADAS CAN bus segment serving those ADAS modules

22. A static forward camera calibration produces in-lane drift during lane keep assist afterward. Re-checking setup, the most likely error is that:

- A. The engine was idling during the static calibration procedure
- B. The calibration target was slightly off-center from the axis
- C. A rear passenger remained seated through the calibration cycle
- D. The vehicle's audio system was operating during calibration

23. A pre-scan performed before ADAS repair primarily functions to:

- A. Document the fault codes already present before the repair
- B. Permanently clear all stored codes without any record kept
- C. Reset the tire pressure monitoring baseline reference values

D. Raise the battery voltage to support the calibration process

24. A forward collision warning intermittently misses a stopped vehicle ahead, and the radar passes self-test. The most appropriate next step is to:

- A. Reprogram the instrument cluster module to a newer version
- B. Inspect the radar's aim, mounting, and any fascia obstruction
- C. Replace the multifunction forward camera assembly outright
- D. Perform a dynamic recalibration before any visual inspection

25. A vehicle with an aftermarket lift shows forward radar elevation readings reading consistently high. The most direct correction is to:

- A. Replace the forward radar with an updated service part number
- B. Reflash the camera module to offset the increased ride height
- C. Reduce the ultrasonic sensor sensitivity setting in software
- D. Restore correct ride height, then re-aim and calibrate the radar

26. During a static radar calibration, a metal tool cart sits a few feet from the target fixture. The likely effect is that the cart:

- A. Improves the radar return by reinforcing the reflected signal
- B. Has no effect since radar disregards nearby stationary objects
- C. Can corrupt the radar return and skew the calibration result
- D. Affects only the camera calibration, not the radar procedure

27. A four-wheel alignment corrects the thrust angle on a vehicle scheduled for ADAS calibration. This matters because:

- A. Alignment changes the radar module's internal clock timing

- B. Thrust angle directly alters the engine's fuel injection timing
- C. Alignment is unrelated and has no effect on ADAS sensors
- D. Sensor reference geometry depends on a correct thrust line

28. A new rear corner radar module is installed but will not communicate on the bus. The reference indicates the omitted step is most likely:

- A. A windshield recalibration of the forward-facing camera
- B. An initialization of the module performed after replacement
- C. A high-beam headlight aim check before powering the module
- D. A four-wheel alignment to reset the thrust angle reference

29. Both rear corner radars go offline together while the rest of the network communicates. The shared architecture points the diagnosis toward:

- A. A clogged cabin air filter restricting airflow over the modules
- B. A windshield camera that lost its stored calibration reference
- C. An open or fault in the private CAN bus between the modules
- D. A bent forward radar bracket located behind the front fascia

30. A forward collision warning false-activates after a fascia repair, with the radar testing good and the bracket straight. The best next check is to:

- A. Replace the instrument cluster module to stop the false alerts
- B. Reinitialize the ultrasonic park sensors in the rear bumper area
- C. Reflash the transmission control module to current calibration
- D. Verify radar aim and inspect the fascia for material or paint buildup

31. The fastest path to an accurate diagnosis when several ADAS features fail after front-end work is to:

- A. Replace the forward radar and camera together as a precaution
- B. Clear all codes and return the vehicle with no further testing
- C. Pre-scan, review codes and network status, then test systematically
- D. Recalibrate every sensor on the vehicle before scanning for codes

32. A multifunction camera is replaced and initialized, but lane keep assist remains erratic. The remaining required step is most likely:

- A. A reset of the tire pressure monitoring system thresholds
- B. A reinitialization of the ultrasonic park assist controller
- C. A camera calibration following the vehicle's specified procedure
- D. A replacement of the forward radar sensor module assembly

33. Understanding the ADAS network architecture during a communication-fault diagnosis primarily allows the technician to:

- A. Select the proper engine oil viscosity for the road test
- B. Set the correct transmission fluid level before calibration
- C. Choose the right headlight bulb wattage for night testing
- D. Identify which bus segment and modules the fault involves

34. The single most critical requirement for static forward camera target placement is:

- A. A backlight source illuminating the rear face of the target
- B. Correct distance and centering relative to the vehicle axis
- C. A 45-degree tilt of the target toward the front bumper line
- D. Placement several feet behind the vehicle's rear bumper

35. A diagnostic strategy for an intermittent ADAS fault should begin by:

- A. Capturing stored and pending codes plus network status data
- B. Replacing the most expensive suspect module as a first step
- C. Clearing all codes before any freeze frame data is recorded
- D. Performing a calibration before retrieving any fault codes

36. A pre-calibration inspection reveals two underinflated tires with uneven wear. This must be corrected first because:

- A. It alters ride height and sensor aim relative to the road surface
- B. Low pressure raises the radar transmit frequency out of its band
- C. It discharges the battery below the minimum required voltage level
- D. It increases electromagnetic noise on the ADAS CAN bus wiring

37. The forward radar module and multifunction forward camera are described in the reference as:

- A. Outputs that only illuminate the dashboard warning indicators
- B. Components used exclusively by the ultrasonic park assist system
- C. The primary inputs for several forward ADAS features
- D. Independent units that never share any sensor data at all

38. A camera-based traffic sign recognition feature fails while all radar features work normally. This most strongly implicates:

- A. The forward-facing camera, its calibration, or its lens condition
- B. The rear corner radar modules sharing the private CAN bus
- C. The ultrasonic park assist sensors mounted within the bumpers
- D. The adaptive cruise control switch located on the steering wheel

39. ADAS data on the Composite Vehicle is communicated primarily over:

- A. A wireless link established individually between each sensor
- B. The low-speed body circuit shared with exterior lighting loads
- C. The ADAS CAN bus connecting the system's ADAS modules
- D. A point-to-point analog harness with no shared digital bus

40. A blind spot warning is inoperative on one side, with a code for lost communication to that side's corner radar. The check that best isolates the fault is to:

- A. Replace both rear corner radar modules together as a matched set
- B. Test the affected module's power, ground, and bus continuity
- C. Recalibrate the forward camera to restore module communication
- D. Reflash the instrument cluster module to a current software level

41. A static camera calibration fails after ride height, geometry, and floor level are all confirmed correct. The next factor to examine is:

- A. The calibration target's distance, centering, and condition
- B. The engine coolant temperature reading at the time of service
- C. The state of charge percentage shown on the instrument cluster
- D. The cabin air recirculation setting chosen during the procedure

42. Adaptive cruise control on the Composite Vehicle becomes active in any forward gear once speed exceeds:

- A. A minimum of 25 mph regardless of the gear position selected
- B. A minimum of 45 mph on level roadway surfaces only
- C. Approximately 5 mph (8.0 km/h) while the vehicle is moving
- D. Any speed including a complete stop with no lower threshold

43. The proper ADAS repair workflow following a sensor-affecting collision repair is:

- A. Calibrate first, then repair, then pre-scan, then road test only
- B. Clear codes, repair, then return the vehicle with no further scan
- C. Post-scan, replace all sensors, then pre-scan as the final step
- D. Pre-scan, repair, calibrate per procedure, then post-scan to verify

44. Skipping a required calibration after a sensor-affecting repair most likely results in:

- A. A sharp and immediate decrease in the vehicle's fuel economy
- B. Erratic transmission shifting behavior at highway road speeds
- C. Faster-than-normal battery discharge during routine driving
- D. An ADAS feature operating inaccurately or failing to function

45. A static radar calibration is being performed in the service bay. Which environmental factor is LEAST likely to affect this procedure?

- A. Reflective metal surfaces positioned close to the target fixture
- B. An incorrect distance between the target fixture and the sensor
- C. The intensity of the overhead lighting within the service bay
- D. A sloped or uneven floor beneath the vehicle being calibrated

46. The driver controls adaptive cruise control settings on the Composite Vehicle using a switch located:

- A. On the lower center console near the gear shifter assembly
- B. On the driver's door armrest beside the window switches
- C. Within the overhead console next to the map lamp cluster
- D. On the steering wheel as the adaptive cruise control switch

47. A vehicle returns with "calibration not complete" after a static camera procedure, and target distance and centering are confirmed correct. The most likely overlooked cause is:

- A. An outdated software version installed on the diagnostic scan tool
- B. A sloped or uneven floor surface beneath the vehicle being serviced
- C. The rear ultrasonic sensors being disconnected during the procedure
- D. A clogged cabin air filter restricting airflow across the sensors

48. A dynamic camera calibration never completes, and logging shows the required speed was rarely held. The corrective action is to:

- A. Switch immediately to a static calibration inside the service bay
- B. Repeat the drive on a route allowing the sustained required speed
- C. Replace the forward camera because the dynamic calibration failed
- D. Initialize the rear corner radar modules before retrying the drive

49. Which module is identified as primary for ADAS CAN bus communication among the rear corner radars?

- A. The left rear corner radar module designated as the primary node
- B. The right rear corner radar module nearest the exhaust outlet
- C. The forward radar module mounted behind the front fascia panel
- D. The instrument cluster module located within the dashboard

50. A forward radar reports incorrect target distances after a front-end collision repair, but bench testing confirms the module is functional. The technician should suspect:

- A. The instrument cluster module has lost its stored ACC settings
- B. The ultrasonic park sensors require a software initialization
- C. The private CAN bus terminating resistor has failed open

D. The radar mounting bracket is bent or not properly seated

Answer Key & Full Answer Explanations

1. C — A flat, level floor within the specified tolerance is essential because static calibration relies on the vehicle sitting at its correct level attitude for accurate sensor aim. A reflective coating, grid lines, or a sloped drainage floor would not satisfy and could compromise the requirement. Floor flatness is a foundational calibration-bay condition.

2. D — Because the left rear corner radar is primary for ADAS CAN bus communication, a "lost communication" fault with it can affect that bus traffic. The reference assigns this module the primary role, so its loss has network significance. Camera sign recognition, front ultrasonic sensors, and cluster brightness are unrelated to this module's role.

3. B — The vehicle's thrust line and centerline are the geometric references that define vehicle geometry for camera target placement. Targets are positioned relative to these axes. Odometer/engine hours, radar frequency/firmware, and battery/coolant values do not define this geometry.

4. A — Correcting ride height so sensor aim matches the reference is required before calibrating a vehicle with sagging springs. Calibration assumes the specified ride height, since a low stance shifts where sensors point. Raising radar sensitivity, reflashing to a "lowered" file, or disabling sensors does not restore correct aim.

5. B — A radar that communicates normally but reports implausible distances after an impact most likely had its physical aim or mounting disturbed. Bus communication is intact, so the fault is mechanical aim rather than electrical. An open resistor, lost cluster setting, or ultrasonic init would present differently.

6. A — Reading posted speed limit signs is a forward-facing camera function. Sign recognition is image-based, unlike radar ranging. Following-distance keeping, blind spot warning, and rear cross traffic alert are radar-based functions.

7. A — The post-scan confirms codes are resolved and verifies no new faults were introduced, closing out the repair. It validates the work after calibration. Documenting pre-existing codes is the pre-scan's job, and the post-scan does not raise voltage or set thrust line.

8. B — A 0–160 meter medium-range radar is suitable for forward detection supporting adaptive cruise and collision warning. That range matches forward ranging functions. Close-range parking, lane marking reading, and sign recognition are handled by other sensors.

9. A — Faded or poorly visible lane markings would most directly prevent a dynamic camera calibration from completing. The camera must read clear markings while driving to learn its reference. Fresh markings, sustainable speed, and clear weather are favorable conditions, not obstacles.

10. D — Cycling the ignition OFF then back ON causes ACC to default to the ON state, per the reference. This documented default behavior must be recognized when verifying status. The disabled, locked-out, and retained-setting options contradict the reference.

11. C — The ADAS control panel switch in the cabin lets a technician turn certain ADAS systems off for a road test, per the reference. It is the intended cabin-level disable control. Pulling fuses, unplugging the camera, or a factory-only session are not the specified method.

12. B — ACC following distance is adjusted through the instrument cluster module (ICM) interface in the dash, per the reference. That is the documented driver interface. A rotary dial, scan tool, or console touchscreen are not specified for this.

13. B — The blind spot warning alerts when a vehicle occupies the blind spot zone in an adjacent rear lane. That is the defined BSW detection condition. Forward stopped-object detection, a 160-meter following distance, and reverse gear describe other systems.

14. A — The 120-ohm resistor terminates the private CAN bus correctly to prevent signal reflections. Proper termination maintains reliable corner-radar communication. It does not reduce supply voltage, convert signals to digital, or filter camera image noise.

15. C — The dual feed means the module requires both the battery supply and switched ignition voltage present for normal operation. Losing either source disrupts function. It does not run on a 5-volt camera reference, depend on a disconnected resistor, or change frequency when off.

16. C — The bracket and forward radar module are serviced separately as distinct, replaceable components, per the reference. This allows bracket service without replacing the module. They are not welded as one unit, self-aiming, or dynamic-only.

17. A — A rear corner radar that is obstructed, misaimed, or not communicating would most directly cause RCTA to never warn while reversing. RCTA depends on that radar detecting crossing traffic. A fogged front camera, an ACC setting, or cluster brightness would not produce this specific failure.

18. D — The ultrasonic sensors provide a close-range input analyzed for use by the ADAS system, per the reference, consistent with park-assist sensing. They are short-range devices. They do not drive ACC, read lane markings, or feed sign recognition.

19. B — A windshield-mounted camera disturbed during glass replacement requires a static or dynamic recalibration of that camera. Replacing the glass shifts the camera reference. Ultrasonic init, corner radar brackets, and a PCM reflash are unrelated.

20. D — The manufacturer's specified procedure for that sensor governs whether calibration is static or dynamic. The procedure defines the method, not bay space, temperature, or battery charge. Following it is required for a valid calibration.

21. D — A fault in the ADAS CAN bus segment serving those modules explains multiple ADAS "no communication" reports while powertrain modules respond. The pattern localizes to the shared ADAS network. A single sensor, a dirty lens, or a PCM processor failure would not knock out multiple ADAS modules at once.

22. B — A target slightly off-center from the vehicle axis produces a marginally inaccurate calibration that appears as in-lane drift. Static camera accuracy depends on precise centering. An idling engine, a rear passenger, or audio operation are not the aiming cause.

23. A — A pre-scan documents the fault codes already present before the repair, creating a baseline record. It identifies pre-existing faults for the shop and customer. It does not clear codes without record, reset TPMS, or raise battery voltage.

24. B — Inspecting the radar's aim, mounting, and any fascia obstruction is the appropriate next step when the module self-tests good but detection is intermittent. Physical misalignment or an obstruction commonly causes missed targets. Reprogramming the cluster, replacing the camera, or recalibrating first does not address radar aim.

25. D — Restoring correct ride height, then re-aiming and calibrating the radar, is the direct fix when a lift raises elevation readings. The lift shifts radar aim, so geometry must be restored and the radar re-aimed. Replacing or reflashing modules does not correct a physical aim change.

26. C — A metal tool cart near the target can corrupt the radar return and skew a static calibration. Radar relies on clean returns from the intended target, so stray reflective objects introduce error. The claims that it helps, has no effect, or affects only cameras are incorrect.

27. D — Sensor reference geometry depends on a correct thrust line, which is why thrust-angle correction matters before calibration. Alignment establishes the geometric axes ADAS aiming references. It does not change radar clock timing or fuel injection, and it is not unrelated.

28. B — An initialization of the module performed after replacement is the likely omitted step when a new corner radar will not communicate. The reference requires initialization to restore communication. Windshield recalibration, headlight aim, and alignment are unrelated to module startup.

29. C — Both rear corner radars offline together while the rest of the network communicates points to an open or fault in the private CAN bus between them. Their shared private bus means one fault can disable both. A cabin filter, windshield camera, or forward radar bracket would not produce this pattern.

30. D — Verifying radar aim and inspecting the fascia for material or paint buildup is the best next check for false FCW after a fascia repair. Excess material in front of the radar or a slight aim error can cause false alerts even with a good bracket. Cluster replacement, ultrasonic init, and a transmission reflash do not address this.

31. C — Pre-scanning, reviewing codes and network status, then testing systematically is the fastest path to an accurate diagnosis when several features fail after front-end work. This gathers evidence before acting. Blanket replacement, clearing codes, or recalibrating everything first are inefficient and risk masking the fault.

32. C — A camera calibration following the vehicle's specified procedure is the remaining required step. Initialization alone does not establish the camera's aim reference, so erratic lane keep assist persists. Resetting TPMS, reinitializing ultrasonics, or replacing the radar does not address camera referencing.

33. D — Understanding the network architecture lets the technician identify which bus segment and modules a communication fault involves. This focuses the diagnosis. Oil viscosity, transmission fluid level, and headlight wattage are unrelated to network diagnosis.

34. B — Correct distance and centering relative to the vehicle axis is the single most critical static camera target placement requirement. Accuracy depends on this precise geometric relationship. Backlighting, a 45-degree tilt, and rear placement are not the governing requirement.

35. A — Capturing stored and pending codes plus network status data is the correct starting point for an intermittent ADAS fault. Recording data before acting preserves the evidence needed to trace the problem. Replacing parts or clearing codes first destroys that evidence.

36. A — Underinflated, unevenly worn tires alter ride height and sensor aim relative to the road, so they must be corrected first. Calibration assumes the specified reference height. Tire condition does not change radar frequency, battery voltage, or bus noise.

37. C — The forward radar module and multifunction forward camera are the primary inputs for several forward ADAS features, per the reference. Multiple functions rely on these two sensors. They are not mere warning outputs, ultrasonic-only components, or fully isolated units.

38. A — A camera-specific loss of traffic sign recognition, while radar features work, implicates the forward-facing camera, its calibration, or lens condition. Sign recognition is an image-based camera function. Rear radars, ultrasonic sensors, and the ACC switch are not involved.

39. C — ADAS data is communicated over the ADAS CAN bus connecting the ADAS modules, per the reference. This shared network is the backbone for ADAS communication. Wireless links, the body lighting circuit, and a point-to-point analog harness are incorrect.

40. B — Testing the affected module's power, ground, and bus continuity best isolates a single-side "lost communication" fault. This pinpoints supply, ground, or bus-path issues before replacing parts. Replacing both modules, recalibrating the camera, or reflashing the cluster wastes effort.

41. A — With ride height, geometry, and floor level confirmed, the calibration target's distance, centering, and condition is the next factor to examine. Target setup is the most likely remaining source of a static failure. Coolant temperature, state-of-charge display, and recirculation setting are irrelevant to aiming.

42. C — ACC becomes active in any forward gear above approximately 5 mph (8.0 km/h), per the reference. That is the documented activation threshold. The 25 mph, 45 mph, and no-limit options are incorrect.

43. D — The proper workflow is pre-scan, repair, calibrate per procedure, then post-scan to verify. The pre-scan documents codes, calibration restores reference after repair, and the post-scan confirms resolution. The other sequences omit or misorder essential steps.

44. D — Skipping a required calibration can leave the ADAS feature operating inaccurately or failing to function, a safety risk. A misreferenced sensor cannot perform reliably. Fuel economy, transmission shifting, and battery drain are not the relevant consequences.

45. C — Overhead lighting intensity is least likely to affect a static radar calibration. Radar aiming depends on physical positioning and reflective interference, not visible light. Reflective metal, incorrect target distance, and a sloped floor all directly affect radar calibration.

46. D — ACC settings are controlled using a switch on the steering wheel, per the reference. This places primary cruise controls within the driver's immediate reach. The console, door armrest, and overhead console are not the specified location.

47. B — A sloped or uneven floor is the most likely overlooked cause when calibration will not complete despite correct target distance and centering. Static calibration assumes the vehicle sits level on its reference geometry. Scan software version, disconnected ultrasonics, and a cabin filter do not cause this aiming failure.

48. B — Repeating the drive on a route that allows the required speed to be sustained is correct when logging shows the speed was rarely held. Dynamic calibration needs sustained specified speed to complete. Switching to static, replacing the camera, or initializing radars does not address the unmet drive condition.

49. A — The left rear corner radar module is designated as the primary node for ADAS CAN bus communication, per the reference. The reference assigns this role specifically to the left rear unit. The right rear radar, forward radar, and cluster module are not the primary node.

50. D — A bent or improperly seated mounting bracket misaims an otherwise functional radar, producing incorrect distance reporting after a collision. Because the module passes bench testing, the fault is physical mounting. A lost cluster setting, ultrasonic init, or open resistor would present differently.