

PRACTICE EXAM 28

1. A vehicle shows both an inoperative blind spot warning on one side and a stored "lost communication" code for that side's corner radar. Which single condition best explains both symptoms?

- A. A misaimed forward radar mounted behind the front bumper fascia
- B. A power, ground, or bus fault affecting that one corner radar module
- C. A dirty forward camera lens obstructing the windshield viewing area
- D. A clogged cabin air filter reducing airflow across the rear modules

2. A forward camera calibration completes successfully, yet lane keep assist still steers the vehicle slightly off-center. Which explanation best fits this outcome?

- A. The camera module lost all communication on the ADAS CAN bus
- B. The calibration target was positioned slightly off the vehicle axis
- C. The forward radar bracket was bent during the calibration setup
- D. The ultrasonic park sensors were disconnected during calibration

3. A vehicle has correct ride height and a level floor, but a static camera calibration still will not complete. Which remaining factor most likely explains the failure?

- A. The engine coolant temperature was below normal during the procedure
- B. The instrument cluster displayed a low state-of-charge percentage
- C. The cabin air recirculation mode was selected during calibration
- D. The calibration target distance or condition was incorrect for the setup

4. A forward radar both communicates normally on the bus and reports implausible target distances after a collision. Which single cause best accounts for both observations?

- A. An open private CAN terminating resistor inside a rear corner radar

- B. The radar's physical aim or mounting was disturbed in the collision
- C. The instrument cluster module lost its stored ACC configuration data
- D. The ultrasonic park assist controller requires a software reinitialization

5. Both rear corner radars drop offline together, while the forward radar, camera, and powertrain modules all communicate normally. Which fault best explains this specific pattern?

- A. A bent forward radar bracket positioned behind the front fascia panel
- B. A windshield-mounted camera that lost its stored calibration reference
- C. An open or fault in the private CAN bus shared by the corner radars
- D. A failed ultrasonic park sensor element located in the rear bumper

6. A traffic sign recognition feature stops working while adaptive cruise control and blind spot warning continue to function normally. Which component is most likely at fault?

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

7. A customer reports that forward collision warning misses stopped vehicles intermittently and the radar passes its self-test. Which action best addresses the most likely cause?

- A. Reprogram the instrument cluster module to a newer software release
- B. Replace the multifunction forward camera assembly as the first step
- C. Perform a dynamic recalibration before any physical inspection occurs
- D. Inspect the radar's aim, mounting, and any front fascia obstruction

8. A vehicle with an aftermarket suspension lift shows forward radar targets reading consistently high in elevation. Which single corrective action addresses the root cause?

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

9. The Composite Vehicle's adaptive cruise control becomes active in any forward gear once the vehicle speed exceeds approximately:

- A. A minimum threshold of 25 mph regardless of the selected gear
- B. About 5 mph (8.0 km/h) once the vehicle is in forward motion
- C. A minimum threshold of 45 mph on level roadway surfaces only
- D. Any speed including a full stop, with no lower limit applied

10. A static camera calibration aborts repeatedly, and the technician confirms correct target distance and centering. Which overlooked condition most likely explains the repeated failure?

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

11. On the Composite Vehicle, the rear corner radar modules communicate with each other over:

- A. The main ADAS CAN bus shared with the forward radar and camera
- B. A wireless internal link that requires no physical wiring connection
- C. The low-speed body lighting circuit shared with exterior lamp loads
- D. A private CAN bus that is separate from the main ADAS network

12. A driver wants to adjust the adaptive cruise control following distance. On the Composite Vehicle, this is done through:

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

13. A rear corner radar module is replaced but will not communicate on the bus afterward. According to the reference, the omitted step was most likely:

- A. A four-wheel alignment to reset the vehicle's stored thrust angle
- B. A windshield recalibration of the forward-facing camera assembly
- C. An initialization of the module performed after its replacement
- D. A high-beam headlight aim adjustment before powering the module

14. A medium-range forward radar on the Composite Vehicle is specified to detect objects across approximately:

- A. A fixed range limited to the first 30 meters directly ahead only
- B. A close range under 5 meters intended only for parking maneuvers
- C. An extended range beyond 500 meters for open highway driving use
- D. A medium range of about 0 to 160 meters (0 to 525 feet) ahead

15. A blind spot warning indicator on the Composite Vehicle illuminates specifically when:

- A. The following distance to a forward target exceeds 160 meters of range
- B. The transmission is shifted into reverse gear at any given road speed
- C. A vehicle occupies the blind spot zone in an adjacent rear lane area

D. The forward radar detects a stationary object within the travel path

16. A vehicle's ride height is below specification due to worn springs. Before ADAS calibration, the technician must first:

- A. Correct the ride height so the sensor aim matches the reference
- B. Increase the radar sensitivity to compensate for the lowered stance
- C. Reflash the camera to a special lowered-vehicle calibration file
- D. Disable the ultrasonic sensors until the worn springs are replaced

17. A forward radar mounts to a bracket behind the fascia. According to the reference, the bracket and module are:

- A. Welded together permanently and replaced only as a single unit
- B. Aimed automatically by the module without any physical adjustment
- C. Serviced separately as distinct, individually replaceable components
- D. Calibrated solely through a dynamic road test with no aiming step

18. A module on the Composite Vehicle receives battery supply voltage and switched ignition voltage. If only the switched-voltage feed is open, the module will:

- A. Raise its transmit frequency above the legal operating band limit
- B. Operate normally with no detectable difference in its function
- C. Fail to power up or operate when the ignition is switched on
- D. Overcharge the private CAN terminating resistor in a corner radar

19. Each rear corner radar module contains a 120-ohm component. On the private CAN bus, this component functions to:

- A. Terminate the bus correctly to prevent signal reflections on it

- B. Reduce the battery supply voltage feeding the radar emitter circuit
- C. Convert the analog radar return into a usable digital distance value
- D. Filter electromagnetic noise originating from the forward camera feed

20. 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 sensor array
- B. A replacement of both rear corner radar mounting brackets together
- C. A reflash of the powertrain control module operating software level
- D. A static or dynamic recalibration of the forward-facing camera

21. A rear cross traffic alert never warns when a vehicle backs 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 engine start
- C. An adaptive cruise following distance setting left at its maximum value
- D. An instrument cluster brightness setting adjusted too low to be read

22. A technician is diagnosing an intermittent ADAS communication fault. The most appropriate first step is to:

- A. Replace the most expensive suspect module as the initial action taken
- B. Clear all stored codes before recording any available freeze frame data
- C. Perform a full calibration before retrieving any of the fault codes
- D. Capture the stored and pending codes along with the network status

23. A technician completes a calibration and clears the codes. Which final step best confirms the repair is fully resolved?

- A. Disconnect the battery for thirty minutes to force a full module reset
- B. Remove and reinstall each ADAS fuse one at a time in a set sequence
- C. Drive the vehicle at maximum road speed to stress-test all the sensors
- D. Perform a post-scan and verify that the systems operate correctly

24. A static radar calibration is in progress, and 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 strength
- B. Can corrupt the radar return and skew the resulting calibration outcome
- C. Has no effect because radar disregards nearby stationary metal objects
- D. Affects only the camera calibration and not the radar-based procedure

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

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

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

- A. Alignment changes the radar module's internal clock timing rate
- B. Thrust angle directly alters the engine's fuel injection timing values
- C. Sensor reference geometry depends on a correct vehicle thrust line
- D. Alignment is unrelated and has no effect on the ADAS sensor aim

27. A forward collision warning false-activates after a fascia repair. The radar self-tests good and the bracket appears straight. The best next check is to:

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

28. A dynamic camera calibration aborts repeatedly on a clear, dry day with good lane markings, on a heavily congested test route. The most likely cause is:

- A. The lane markings are too reflective for the camera to interpret them
- B. The required road speed cannot be sustained in the stop-and-go traffic
- C. The forward radar bracket is bent and obstructing the camera's view
- D. The ultrasonic sensors are interfering with the camera's data feed

29. Several ADAS modules report "no communication" while the engine and transmission modules respond normally. This pattern most strongly indicates:

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

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

- A. A backlight source illuminating the rear face of the target board
- B. A 45-degree tilt of the target toward the front bumper of the vehicle
- C. Correct distance and centering relative to the vehicle's reference axis

D. Placement several feet behind the vehicle's rear bumper line area

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

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

32. A vehicle returns with several ADAS features failing at once after minor front-end work. The fastest path to an accurate diagnosis is to:

- A. Pre-scan, review codes and network status, then test systematically
- B. Replace the forward radar and camera together as a precaution first
- C. Clear all codes and return the vehicle without any further testing
- D. Recalibrate every sensor on the vehicle before scanning for codes

33. Which module is identified as primary for ADAS CAN bus communication among the rear corner radars on the Composite Vehicle?

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

34. ADAS data on the Composite Vehicle is communicated primarily over which network?

- A. A wireless link established individually between each sensor pairing
- B. The ADAS CAN bus connecting the system's various ADAS modules

- C. The low-speed body circuit shared with the exterior lighting loads
- D. A point-to-point analog harness with no shared digital bus at all

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

- A. Document the fault codes already present before the repair begins
- B. Permanently clear all stored codes without keeping any record of them
- C. Reset the tire pressure monitoring system baseline reference values
- D. Raise the battery voltage needed to support the calibration process

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

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

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

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

38. A bent forward radar bracket is found after a low-speed impact, and the radar module tests good. The correct action is to:

- A. Leave the bracket since radar self-corrects for any small offset amount
- B. Repair or replace the bracket, then aim and calibrate the radar module
- C. Replace the forward camera because it shares the same radar bracket
- D. Recalibrate only the ultrasonic sensors to offset the bent bracket angle

39. Underinflated, unevenly worn tires must be corrected before calibration because they:

- A. Change the vehicle's ride height and therefore the sensor aim angle
- B. Increase the electromagnetic noise carried on the ADAS CAN bus wiring
- C. Raise the radar module's transmit frequency above its legal band limit
- D. Discharge the battery below the minimum required calibration voltage

40. A vehicle with correct ride height, geometry, and a level floor still fails a static camera calibration. The next factor to examine is:

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

41. A camera reads signs and lane markings while radar measures range, because:

- A. Radar interprets characters and shapes better than a camera ever can
- B. Each sensor's operating principle suits it to imaging or to ranging
- C. Cameras measure closing distance more precisely than a radar unit
- D. The two sensors are fully interchangeable for any given ADAS function

42. A technician must turn off an ADAS feature for a road test. On the Composite Vehicle, the intended method is to use:

- A. The dedicated ADAS fuse pulled directly from the underhood fuse box
- B. A factory scan tool session that the manufacturer must first authorize
- C. The forward camera connector disconnected by hand at the mirror base
- D. The ADAS control panel switch located inside the vehicle's cabin area

43. A replacement decision for a one-sided corner radar communication code should begin with testing rather than replacing both modules because:

- A. Both corner radar modules always fail together when one loses the bus
- B. The forward camera must be replaced before either corner radar module
- C. The fault may lie in one module's power, ground, or bus connection path
- D. The instrument cluster must be reflashed before any corner radar work

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

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

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 radar target fixture
- B. The intensity of the overhead lighting within the service bay area
- C. An incorrect distance between the target fixture and the radar sensor
- D. A sloped or uneven floor beneath the vehicle that is being calibrated

46. Skipping a required calibration after a sensor-affecting repair is a safety concern because:

- A. The vehicle's fuel economy will immediately decrease after the repair
- B. The transmission will begin shifting erratically at highway road speeds
- C. A misreferenced sensor may cause the feature to operate unreliably
- D. The battery will discharge faster than normal during routine driving use

47. A technician must establish vehicle geometry before a forward camera calibration. The references that define that geometry are:

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

48. Adaptive cruise control settings on the Composite Vehicle are controlled using a switch located:

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

49. Understanding which modules share a given bus segment during a communication-fault diagnosis primarily helps the technician to:

- A. Select the correct engine oil viscosity for the verification road test
- B. Determine the proper tire inflation pressure for the calibration setup
- C. Narrow the fault to the affected bus and its connected ADAS modules
- D. Choose the appropriate wiper blade length for the test road drive

50. A medium-range radar specified at 0–160 meters is best suited to support which feature?

- A. Close-range park assist maneuvering within one meter of an obstacle
- B. Reading posted speed limit signs positioned along the roadway ahead
- C. Detecting painted lane markings used for the lane keep assist function
- D. Forward detection for adaptive cruise control and collision warning

Answer Key & Full Answer Explanations

1. B — A power, ground, or bus fault affecting that one corner radar explains both the one-sided inoperative BSW and the matching "lost communication" code. A single module's circuit fault produces both symptoms together. A forward radar, camera lens, or cabin filter would not target one corner radar this way.
2. B — A target positioned slightly off the vehicle axis explains a calibration that "completes" yet leaves lane keep assist steering off-center. The camera learned a slightly wrong reference. Lost bus communication, a bent radar bracket, or disconnected ultrasonics would present as faults rather than a subtle steering bias.
3. D — With ride height and floor level confirmed, an incorrect target distance or condition most likely explains a persistent static calibration failure. Target setup is the next variable to verify. Coolant temperature, state-of-charge display, and recirculation mode are irrelevant to aiming.
4. B — A radar that communicates normally but reports implausible distances after a collision is best explained by its physical aim or mounting being disturbed. Bus communication is intact, so the fault is mechanical aim. An open resistor, lost cluster setting, or ultrasonic init would present differently.
5. C — An open or fault in the private CAN bus shared by the corner radars explains both rear radars dropping offline while everything else communicates. Their shared private bus is the common failure point. A forward radar bracket, windshield camera, or rear ultrasonic sensor would not produce this pattern.
6. C — A camera-specific loss of traffic sign recognition, while radar features work, points to 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.

7. D — Inspecting the radar's aim, mounting, and any fascia obstruction addresses the most likely cause when the module self-tests good but misses stopped vehicles intermittently. Physical misalignment or obstruction commonly causes missed targets. Reprogramming the cluster, replacing the camera, or recalibrating first does not address radar aim.

8. D — Restoring correct ride height, then re-aiming and calibrating the radar, addresses the root cause when a lift raises elevation readings. The lift changes vehicle attitude and shifts radar aim. Replacing or reflashing modules does not correct a physical aim change.

9. B — ACC becomes active in any forward gear above about 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.

10. A — A sloped or uneven floor most likely explains a static camera calibration that aborts 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.

11. D — The rear corner radars communicate over a private CAN bus separate from the main ADAS network, per the reference. This dedicated bus isolates their inter-module traffic. The main bus, a wireless link, and the body lighting circuit are incorrect.

12. D — 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. C — An initialization of the module after replacement is the omitted step when a new corner radar will not communicate. The reference requires initialization to restore communication. Alignment, windshield recalibration, and headlight aim are unrelated to module startup.

14. D — The medium-range forward radar covers about 0 to 160 meters (0–525 ft) per the reference. This range supports forward functions like ACC and collision warning. The 30-meter, sub-5-meter, and 500-meter options contradict the specification.

15. C — The blind spot warning indicator illuminates when a vehicle occupies the blind spot zone in an adjacent rear lane. That is the defined BSW detection condition. A 160-meter following distance, reverse gear, and forward stationary-object detection describe other systems.

16. A — Correcting the ride height so sensor aim matches the reference is required first when worn springs lower the vehicle. Calibration assumes the specified ride height. Raising sensitivity, reflashing to a "lowered" file, or disabling sensors does not restore correct aim.

17. 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.

18. C — With only the switched-voltage feed open, the module fails to power up or operate when the ignition is on, despite battery voltage being present. The module requires both sources for normal operation. It does not change frequency, run normally, or overcharge a resistor.

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

20. D — 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.

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

22. D — Capturing the stored and pending codes along with network status is the appropriate first step for an intermittent communication fault. Gathering data before acting preserves the evidence needed to trace the problem. Replacing parts or clearing codes first destroys that evidence.

23. D — Performing a post-scan and verifying correct system operation best confirms the repair is resolved. The post-scan confirms codes cleared with no new faults, and a functional check validates the systems. Battery disconnects, fuse cycling, and max-speed runs do not validate a calibration.

24. B — 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.

25. C — 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.

26. C — Sensor reference geometry depends on a correct vehicle 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.

27. 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.

28. B — The required road speed cannot be sustained in stop-and-go congestion, which aborts a dynamic camera calibration even on a clear day with good markings. Dynamic calibration depends on holding the specified speed. Reflective markings, a bent radar bracket, and ultrasonic interference are not the cause here.

29. A — 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.

30. C — Correct distance and centering relative to the vehicle's reference 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.

31. A — 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.

32. A — 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.

33. B — 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.

34. B — 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. A wireless link, the body lighting circuit, and a point-to-point analog harness are incorrect.

35. A — A pre-scan documents the fault codes already present before the repair begins, 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.

36. C — 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.

37. A — 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.

38. B — Repairing or replacing the bent bracket, then aiming and calibrating the radar, is correct because a bent bracket misaims an otherwise good module. Radar does not self-compensate for physical misalignment. The camera and ultrasonic options are unrelated.

39. A — Underinflated, unevenly worn tires change the vehicle's ride height and therefore the sensor aim angle, so they must be corrected first. Calibration assumes the specified reference height. Tire condition does not raise bus noise, change radar frequency, or discharge the battery for this reason.

40. 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.

41. B — Each sensor's operating principle suits it to either imaging or ranging, which is why the camera reads signs and lanes while radar measures range. Their physics drives the division of labor. Radar does not interpret characters better, the camera does not range better, and they are not interchangeable.

42. D — The ADAS control panel switch in the cabin is the intended method to turn an ADAS feature off for a road test, per the reference. It is the designed cabin-level disable control. Pulling a fuse, a factory-only session, or unplugging the camera are not the specified method.

43. C — Testing first is correct because the fault may lie in one module's power, ground, or bus connection path, making replacement of both modules premature. Isolating the cause avoids unnecessary parts. Both modules do not always fail together, and neither the camera nor the cluster must be addressed first.

44. B — 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.

45. B — 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. C — A misreferenced sensor may cause the feature to operate unreliably, which is why skipping a required calibration is a safety concern. The feature cannot perform correctly without a valid reference. Fuel economy, transmission shifting, and battery drain are not the relevant consequences.

47. A — The vehicle's thrust line and centerline geometric reference axes define vehicle geometry for camera calibration. Targets are positioned relative to these axes. Odometer/engine hours, radar frequency/firmware, and battery/coolant values do not define this geometry.

48. A — 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.

49. C — Knowing which modules share a bus segment lets the technician narrow the fault to the affected bus and its connected ADAS modules. Network mapping is a diagnostic aid for communication faults. Oil viscosity, tire pressure, and wiper length are irrelevant to that purpose.

50. D — A 0–160 meter medium-range radar is best suited to forward detection for adaptive cruise control and collision warning. That range matches forward ranging functions. Close-range park assist, sign reading, and lane marking detection are handled by other sensors.