

PRACTICE EXAM 17: ASE A4 SIMULATION

(40 QUESTIONS)

STEERING SYSTEMS DIAGNOSIS AND REPAIR (Questions 1–12)

1. A power steering pump makes a whining noise. What is the MOST common cause?
 - A. Low fluid level or trapped air in the system during normal operation conditions
 - B. Worn internal bearings in the pump housing assembly requiring immediate replacement
 - C. A stuck pressure relief valve producing pressure pulsations during the pump operation
 - D. Excessive pump pulley misalignment causing belt chatter at the pulley contact surface
2. A clockspring must be centered DURING installation. What centers it?
 - A. The SRS control module during the SRS system initialization after battery reconnection
 - B. The ignition switch position at the moment of clockspring installation to the column
 - C. Mechanical centering per manufacturer procedure before steering wheel is installed
 - D. Automatic centering once the steering wheel is turned lock to lock on the first drive
3. The load-carrying ball joint on an SLA suspension with spring on the lower arm is:
 - A. The upper ball joint because it locates the top of the knuckle assembly to the frame
 - B. The lower ball joint because the spring rests on the lower arm transferring weight
 - C. Either joint depending on the vehicle manufacturer's specific design intent for service
 - D. Neither joint because the spring isolates the load from the joints in normal service

4. An EPS-equipped vehicle has no assist. DTC shows "EPS supply voltage low." Battery voltage at rest is 12.6 V. What is the NEXT step?

- A. Replace the EPS control module because the voltage loss damaged internal components
- B. Replace the battery with a new unit because the 12.6 V resting voltage is not adequate
- C. Disconnect the battery for 30 minutes to reset the EPS module memory completely
- D. Perform voltage drop testing on the EPS power feed and ground under maximum load

5. A recirculating ball gearbox's sector shaft over-center preload is measured with:

- A. The pitman arm removed and the steering wheel at the center position of travel
- B. The pitman arm installed at the center and the engine running at idle speed
- C. The steering wheel at full lock with the pitman arm installed to specification
- D. The sector shaft disconnected from the worm shaft at the gearbox assembly

6. Which hydraulic power steering fluid contamination indicates internal wear metals?

- A. Amber fluid with slight darkening from age and normal heat during service operation
- B. Clear fluid with a slight yellow tint after a fluid exchange service completed recently
- C. Gray or silver-tinged fluid with visible metallic particles suspended in the fluid flow
- D. Pink translucent fluid at full level on the dipstick indicating correct fluid condition

7. The collapsible section of a steering column is designed to:

- A. Allow for angular offset between the column and the steering gear during normal operation
- B. Absorb crash energy during a frontal collision to limit driver intrusion during accidents
- C. Prevent driveline vibration from transmitting through the column to the steering wheel rim
- D. Compensate for thermal expansion during engine warm-up cycles in cold weather conditions

8. A power steering pressure test reads 1,100 psi at relief when specification is 1,200 psi. What does this indicate?

- A. The power steering cooler is restricting flow and reducing the system pressure at relief
- B. The high-pressure hose has an internal leak bypassing fluid before reaching the gear
- C. The relief valve is functioning correctly and preventing the system from over-pressurizing
- D. The pump is worn or the relief valve is stuck open — pump or relief valve replacement

9. A vehicle with rack-mounted EPS has a DTC for "torque sensor signal implausible." What is the correct repair?

- A. Replace the rack and pinion assembly because the torque sensor is integrated and non-serviceable
- B. Replace only the torque sensor as a separately serviceable component of the rack assembly
- C. Clear the DTC and road test the vehicle to verify the condition returns during normal driving
- D. Recalibrate the steering angle sensor using the manufacturer scan tool procedure to reset

10. A steering damper on a pickup truck EXCEPT:

- A. Dampens high-velocity steering motion to prevent death wobble conditions during driving
- B. Is mounted between the axle and drag link on solid-axle front suspension designs today
- C. Provides assistance to steering effort during parking maneuvers at slow speed conditions
- D. Should be inspected for external oil leakage and inadequate resistance during stroke testing

11. An intermediate shaft with a U-joint at each end is designed to:

- A. Absorb crash energy during a frontal collision by shortening the distance of the column
- B. Provide hydraulic pressure to the steering gear during normal operation of the vehicle
- C. Allow rotation in all directions without any angular offset between column and gear
- D. Transmit rotational motion between the steering column and steering gear through angular offset

12. A clockspring failure is MOST likely to cause:

- A. Reduced power steering assist during parking-lot steering maneuvers at slow speeds only
- B. An inoperative horn and illuminated SRS warning light on the vehicle dashboard
- C. Slow power steering fluid leakage from the rack and pinion bellows boot area
- D. Increased steering effort during highway cruising at highway speeds above 50 mph

SUSPENSION SYSTEMS DIAGNOSIS AND REPAIR (Questions 13–24)

13. A MacPherson strut suspension EXCEPT:

- A. Uses an upper control arm to locate the top of the knuckle during normal driving operation
- B. Has a coil spring mounted concentrically around the strut body in the assembly
- C. Uses the strut as the upper locator of the knuckle in the front suspension design
- D. Includes a lower control arm pivot to locate the bottom of the knuckle assembly

14. A wear-indicator ball joint has its grease fitting recessed flush with the housing at curb height. What does this mean?

- A. The ball joint is within acceptable wear limits and no replacement is needed during service
- B. The ball joint requires additional grease injection to extend its service life in operation
- C. The ball joint has reached its wear limit and requires replacement before further service
- D. The inspection must be performed on a lift with wheels hanging free for accurate reading

15. A stabilizer bar end link fails. What is the MOST common symptom?

- A. Squeaking noise during parking-lot steering maneuvers at low speeds only for the vehicle
- B. Reduced steering effort during highway driving at highway speeds above 55 mph only
- C. Excessive tire wear on both front tires across the tread blocks during normal driving

D. Clunking noise over small bumps during straight-line driving on normal road surfaces

16. Air suspension must be disabled BEFORE lifting because:

- A. The compressor can be damaged if it runs during the lifting procedure without being disabled
- B. The ride height sensors report extreme droop and the system may release or inflate air
- C. The air springs will burst if the vehicle is lifted without disabling the air system first
- D. The battery will be drained by the continuous compressor running during vehicle lift time

17. U-bolts on a leaf spring should be torqued:

- A. In a crisscross pattern to specification per the manufacturer's specified torque sequence
- B. To double the specification to ensure the spring pack does not shift during driving
- C. With an impact wrench until they stop rotating for maximum clamping force during operation
- D. Hand-tight to allow the spring pack to settle before final torque at the service interval later

18. A torsion bar is installed in the wrong orientation. What is the likely consequence?

- A. The ride height will be incorrect but the bar will function normally for service
- B. The preload adjuster will not reach specification requiring aftermarket adjustment hardware
- C. The torsion bar will eventually fracture from loading in the reversed direction during service
- D. The vehicle will lean to one side during cornering maneuvers at highway speeds only

19. An adaptive damper with a fault code requires replacement:

- A. Only on the side showing the fault code to save cost and minimize service labor time
- B. As a pair on the same axle to maintain matched damping characteristics across both wheels
- C. Along with all four dampers on the vehicle to ensure matched performance characteristics

D. Only after confirming the fault is not caused by a wiring harness or connector failure

20. Subframe centering pins are used during service to:

A. Carry electrical current for the vehicle body ground during the reassembly for safety purposes

B. Prevent corrosion between the subframe and body during the installation phase of the service

C. Lubricate the subframe bushings during the installation of the assembly to the body

D. Align the subframe to its design position during mounting bolt torque application to body

21. A coil spring with a visible crack requires:

A. Replacement along with the opposite spring on the same axle as a matched pair for the service

B. Welding and reinforcement to restore the spring's original strength characteristics in service

C. Installation of a spring insert to maintain ride height without full spring replacement

D. Monitoring during future service intervals — replace only if the spring fails completely

22. A shock absorber bounce test indicates failed dampers when:

A. No rebound occurs after pushing down hard on each corner — the shock is fully seized

B. Exactly one rebound cycle occurs before the vehicle settles at each corner during test

C. Multiple bounce cycles occur before the vehicle settles at each corner of the vehicle test

D. The vehicle bounces slowly for 5 seconds before settling at each corner during the bounce test

23. Leaf spring center bolts locate the axle on the spring. If a center bolt shears:

A. The vehicle will sit lower on the affected side until the center bolt is replaced during service

B. The axle will not shift because the U-bolts provide adequate clamping force during driving

C. The leaf spring will separate causing the axle to drop during operation at highway speed

D. The axle will walk fore-aft on the spring causing visible wheelbase asymmetry on that side

24. A load-carrying ball joint should be inspected with the vehicle:

A. On a two-post lift with wheels hanging free to allow the joint to move during inspection

B. At curb height with the suspension loaded — OR with the joint unloaded via pry bar on a lift

C. On jack stands placed under the frame rails to simulate curb height during inspection

D. At full suspension compression to test the ball joint under maximum load conditions

WHEEL ALIGNMENT DIAGNOSIS, ADJUSTMENT, AND REPAIR (Questions 25–35)

25. Camber pull direction goes toward the:

A. More-positive side of the vehicle — camber pulls to the side with more positive camber

B. Less-positive side of the vehicle — camber pulls to the side with less positive camber

C. Rear of the vehicle because camber affects rear toe adjustment during highway driving

D. Front of the vehicle because camber affects the front toe setting during normal service

26. Caster pull direction goes toward the:

A. More-caster side of the vehicle — caster pulls to the side with more positive caster

B. Rear of the vehicle because caster affects rear toe during normal operation of the vehicle

C. Less-caster side of the vehicle — caster pulls to the side with less positive caster setting

D. Side with more negative camber because caster and camber interact during normal operation

27. Excessive toe-in at the front wheels produces which tire wear pattern?

A. Inside-edge wear with smooth feel across the tread — no feathering pattern present on tire

- B. Center tread wear with both shoulders showing significantly less wear pattern across tire
- C. Cupped or scalloped wear around the tire circumference from worn shock absorbers mostly
- D. Outside-edge wear with feathering that ramps up from outside toward inside across tread

28. Included angle (SAI + Camber) is used to diagnose:

- A. Tire wear patterns from excessive camber at the front wheels during highway driving
- B. Bent steering knuckles — matching included angles side-to-side indicate a straight knuckle
- C. Excessive caster imbalance between the left and right front wheels during alignment service
- D. Rear toe asymmetry creating a thrust angle affecting the vehicle during normal driving

29. The correct modern alignment sequence is:

- A. Rear toe first to center thrust line, then front caster, front camber, and front toe last
- B. Front toe first to center the steering wheel, then front camber, front caster, and rear toe
- C. Front caster and camber before rear toe, then front toe last after all other angles are done
- D. Rear camber first, then rear toe, then front toe, front caster, and front camber last in sequence

30. Setback is:

- A. The angle between the rear axle thrust line and the vehicle geometric centerline measurement
- B. The side-to-side camber difference between the left and right front wheels during alignment
- C. The fore-aft offset between the two wheels on the same axle measurement during alignment
- D. The angle between the steering axis and vertical viewed from the front during service

31. Thrust angle is:

- A. The fore-aft offset between wheels on the same axle measurement during alignment service

- B. The angle between SAI and camber at the front wheels during the alignment rack service
- C. The angle between the rear axle thrust line and the vehicle geometric centerline measurement
- D. The angle between the steering wheel and the road wheels during alignment rack service

32. Tire conicity is identified by:

- A. Swapping the front tires side-to-side — the pull direction reverses when the tire is moved
- B. Measuring the tire tread depth at each shoulder and comparing the wear pattern observed
- C. Performing a wheel balance to detect the cone-shaped tread pattern on the tire surface
- D. Inspecting the tire sidewall for bulging or damage indicating internal tire construction failure

33. A vehicle with lane-keep assist has had its alignment completed. The steering wheel was re-centered during toe adjustment. Which calibration is typically required?

- A. Only the tire pressure monitoring system requires reset after the alignment service is done
- B. Only the electronic stability control module requires a relearn during a road test on the highway
- C. Only the forward camera requires calibration because the SAS is isolated from alignment service
- D. The steering angle sensor and typically the ADAS forward camera require calibration after service

34. A FWD vehicle with torsion beam rear suspension has rear toe reading out of specification. The torsion beam typically has no rear toe adjustment. What is the correct action?

- A. Install aftermarket torsion beam mounts to provide rear toe adjustment capability for service
- B. Inspect the torsion beam and trailing arm for bent or damaged condition — replace as needed
- C. Adjust the front toe to compensate for the rear asymmetry and document on the printout
- D. Rotate the tires to equalize the wear patterns caused by the out-of-specification rear toe

35. Before beginning any alignment measurements, the technician must:

- A. Adjust the front toe to approximately zero for a measurement baseline before service
- B. Perform a caster sweep to record initial caster values before starting any other measurements
- C. Perform a road test to evaluate steering feel before beginning the alignment procedure
- D. Perform wheel runout compensation on each wheel to correct for clamp offset errors

WHEEL AND TIRE DIAGNOSIS AND SERVICE (Questions 36–40)

36. A TPMS sensor that stops reporting is MOST often caused by:

- A. A tire pressure that has dropped below the activation threshold for the sensor operation
- B. A TPMS sensor battery that has reached end of life — typical battery life is 5–10 years
- C. A TPMS module programming loss requiring reprogramming with the vehicle VIN identifier
- D. A wheel speed sensor failure at the corner affecting the TPMS direct sensor communication

37. A torque-to-yield axle nut should be:

- A. Replaced with a new nut whenever it is removed because it stretches during initial torque
- B. Reused if it is not visibly damaged from the initial service to save cost during the repair
- C. Torqued to 50% beyond specification to ensure adequate clamping force in service
- D. Coated with anti-seize compound before installation to prevent corrosion during service

38. The maximum safe pressure for seating a tire bead during mounting is:

- A. Whatever pressure is needed to seat the beads completely against the wheel during service
- B. Sixty psi for standard passenger tire applications on passenger vehicle wheels during mount
- C. Forty psi for standard passenger tire applications on passenger vehicle wheels during mount
- D. The maximum pressure listed on the tire sidewall during normal operating conditions of use

39. A tire's aspect ratio of 55 means:

- A. The tire has a speed rating of 55 mph maximum during sustained operation at any speed
- B. The tire has a wheel diameter of 55 millimeters measured from bead to bead across the rim
- C. The tire has a load index of 55 indicating maximum load capacity at rated pressure value
- D. The tire's sidewall height is 55% of the section width in millimeters during service use

40. A wheel-and-tire assembly has residual dynamic imbalance requiring correction at:

- A. Only the outer rim edge because dynamic imbalance is correctable at a single plane location
- B. Both the inner and outer rim edges because dynamic imbalance requires correction in two planes
- C. Only the inner rim edge because dynamic imbalance is inward-facing only during operation
- D. The spoke locations to avoid affecting the visual appearance of the wheel during service

Practice Exam 17: Answer Key and Explanations

1. A — The most common cause of power steering pump whine is low fluid level or trapped air in the system. The pump draws in air with the fluid, creating the characteristic high-pitched whine as aeration disrupts proper pump operation. Always check fluid level and perform a thorough bleed before considering internal pump wear or other causes.

2. C — Clocksprings are mechanically centered per the manufacturer's specified procedure before the steering wheel is installed. This typically involves rotating the clockspring to a specific position and aligning marks or using a centering tool. Installing the wheel with an uncentered clockspring strains the ribbon cable and causes it to break during the first steering cycle.

3. B — In an SLA suspension with the spring on the lower control arm, the lower ball joint is load-carrying because the spring's load passes through it to the knuckle. The upper ball joint is the follower. Identifying which joint is load-carrying determines both wear rate and the correct inspection technique for that specific joint.

4. D — EPS modules are highly sensitive to supply voltage. A DTC for "supply voltage low" with a battery testing good at rest points to high-resistance connections that only reveal themselves under load. Voltage drop testing on the EPS power and ground circuits under maximum current flow is the correct diagnostic step — not module or battery replacement.
5. A — Over-center preload on a recirculating ball gearbox is always measured with the pitman arm removed and the steering wheel at the center position. Installing the pitman arm transfers linkage loads through the gear, producing false readings. Pitman removed + wheel centered is the only correct setup for this measurement.
6. C — Gray or silver-tinged fluid with visible metallic particles is the specific signature of internal component wear. The metal particles originate from worn pump vanes, rack cylinder walls, or sector gear teeth. This contamination accelerates wear throughout the system and requires both fluid replacement and identification/repair of the metal source.
7. B — The collapsible section of a steering column absorbs crash energy during frontal collisions by shortening, limiting how far the steering column intrudes toward the driver. This is a one-time safety feature — once deformed, the column cannot perform its protective function. Column replacement is required after any collision that deforms the collapsible section.
8. D — Failure to reach relief pressure (1,100 psi vs. 1,200 psi specification) indicates either a worn pump unable to generate full pressure or a stuck-open relief valve that dumps pressure before reaching the set point. Either condition requires component repair — pump replacement or rebuild. This symptom is definitive for one of these two failures.
9. A — On modern rack-mounted EPS systems, the torque sensor is integrated into the rack assembly as a non-serviceable component. A "torque sensor signal implausible" DTC requires complete rack replacement. Separate torque sensor replacement, clearing and road testing, and SAS recalibration do not address the underlying sensor failure.
10. C — A steering damper dampens high-velocity steering motion (bump steer, shimmy, death wobble) but does NOT provide assistance to steering effort. Steering assist comes from the hydraulic power steering or EPS system, not from the damper. The damper is a passive component that resists rapid motion but adds no power to the steering system.

11. D — An intermediate shaft with U-joints transmits rotational motion between the steering column and steering gear through angular offset — the U-joints allow the shaft to rotate smoothly even when the column and gear are not perfectly aligned. This is the fundamental purpose of U-joints in a steering column intermediate shaft.

12. B — Clockspring failure directly affects circuits that route through the clockspring — primarily the horn, the airbag squib, and steering wheel controls. When the clockspring fails, the horn goes dead and the SRS warning light illuminates. It does not affect hydraulic assist, rack sealing, or highway steering effort.

13. A — A MacPherson strut suspension eliminates the upper control arm — the strut itself serves as the upper locator of the knuckle. This is the defining architectural feature of MacPherson strut designs. The lower control arm, coil spring, and upper strut mount with bearing are all standard components of the MacPherson design.

14. C — When the wear indicator (grease fitting) on a load-carrying ball joint recedes flush with or below the housing surface at curb height, the joint has reached its wear limit and requires replacement. Only an indicator projecting above the housing indicates acceptable wear. Inspection must be at curb height with the joint loaded.

15. D — Failed stabilizer bar end links produce bilateral clunking over small bumps during straight-line driving. The noise diminishes during cornering because the links are loaded (quiet under tension) and returns during straight driving over bumps. This specific symptom profile distinguishes end links from other failure modes.

16. B — Air suspension systems must be disabled before lifting because the ride height sensors report extreme droop when wheels are off the ground. The system may respond by releasing air (potentially making the vehicle drop too far) or commanding inflation (potentially overextending the air springs). Disabling prevents these unwanted responses.

17. A — U-bolts must be torqued in a crisscross pattern per manufacturer specification. This ensures even clamping force across the spring pack. Sequential torque, impact tightening, or hand-tight with later retorque all produce uneven or inadequate clamping. Crisscross pattern torque in stages is the correct industry-standard practice.

18. C — Torsion bars are heat-treated for one-direction loading. Installation in the reversed orientation (wrong side of vehicle) eventually causes the bar to fracture from reversed stress patterns. Manufacturer markings for left/right orientation must be respected — this is a safety issue, not just a performance issue.

19. B — Adaptive dampers must be replaced in pairs on the same axle to maintain matched damping characteristics. Asymmetric damping from one new and one old damper cannot be compensated by the control module and produces unpredictable handling. However, wiring should be verified first before condemning the damper itself.

20. D — Subframe centering pins align the subframe to its design position during mounting bolt torque application. The pins ensure the subframe doesn't sit a few millimeters off design position, which would make alignment uncorrectable through normal adjustment range. Pins lock position while bolts are torqued.

21. A — A cracked coil spring requires replacement along with the opposite spring on the same axle as a matched pair. Mismatched spring rates cause uneven ride height and compromised handling. Welding, spring inserts, and monitoring-for-failure are all unsafe practices — pair replacement is the industry standard.

22. C — A properly functioning shock produces ONE complete rebound cycle before settling. Multiple cycles indicate failed damping — the shock cannot control spring oscillation. No rebound suggests over-damping or seized shock; slow 5-second settling also indicates abnormal damping. Multiple cycles is the specific failure pattern.

23. D — When the leaf spring center bolt shears, the axle walks fore-aft on the spring pack, causing visible wheelbase asymmetry. The U-bolts clamp the axle to the spring but do not locate it — only the center bolt provides that function. This is a specific and distinct failure pattern from broken leaves or shock issues.

24. B — A load-carrying ball joint must be inspected either at curb height (with the suspension loaded naturally) OR on a lift with the joint unloaded via pry bar between the lower control arm and frame. Both methods work; either unloads the joint enough to reveal play. Wheels-hanging without unloading hides play; jack stands under the frame don't unload the joint properly.

25. A — Camber pull direction goes toward the MORE-positive side. The side with more positive camber causes the tire to roll more on its inner edge, creating a pulling force in that direction. This is the opposite of caster pull direction. Memorize the distinction: camber → more-positive side; caster → less-caster side.

26. C — Caster pull direction goes toward the LESS-caster side. The side with less caster has weaker self-centering force, causing the vehicle to pull toward that side. This is opposite to camber pull direction, which is why the two are commonly confused. Memorize: caster → less-caster side.

27. D — Excessive toe-in causes the tires to scrub outward as they roll, producing outside-edge wear with feathered sawtooth patterns. Running a hand across the tread feels catchy in one direction, smooth in the other. Toe-in wears the outside edges with feathering; toe-out wears the inside edges.

28. B — Included angle (SAI + Camber) is used to diagnose bent steering knuckles. Matching included angles side-to-side confirm the knuckles are straight. When included angles differ by more than 0.5° , a knuckle is typically bent. SAI is built into the knuckle casting and cannot be adjusted, making this a reliable diagnostic.

29. A — The correct modern alignment sequence is rear toe first (to center the thrust line), then front caster, then front camber, then front toe with the steering wheel centered. This order exists because front toe is set relative to the thrust line — setting it before rear toe would require redoing it. This sequence is industry-standard.

30. C — Setback is the fore-aft offset between the two wheels on the same axle. Significant setback typically indicates collision damage that has shifted a subframe or bent a control arm. Setback is different from thrust angle (rear axle direction) and from camber/SAI measurements. Fore-aft wheel offset is the specific definition.

31. C — Thrust angle is the angle between the rear axle's thrust line (the direction the rear axle is pointing) and the vehicle's geometric centerline. A non-zero thrust angle causes the vehicle to crab. This is specifically a rear-axle measurement and is distinct from setback, SAI, or front-rear geometry relationships.

32. A — Tire conicity is identified by swapping the front tires side-to-side and observing whether the pull direction reverses. If the pull changes direction, a tire is causing the pull through its inherent lead

direction from manufacturing. Alignment-caused pulls remain constant regardless of tire position. This is the definitive diagnostic test.

33. D — When the steering wheel is re-centered during alignment toe adjustment, the SAS's learned zero-point is invalidated and calibration is required. On lane-keep-assist-equipped vehicles, the forward camera also typically requires calibration because the lane-keep system uses the SAS reference. Both calibrations are typically required.

34. B — Torsion beam rear suspensions typically have no rear toe adjustment. An out-of-spec reading means the beam or trailing arm is bent — requiring component replacement, not adjustment. Aftermarket adjustment, front toe compensation, and tire rotation all miss the actual problem — a bent suspension component.

35. D — Wheel runout compensation is the required first step before any alignment measurement. Without compensation, every reading is offset by a fraction of a degree due to the clamp's offset from the wheel's rotation axis. Skipping this step invalidates the entire alignment. It must be done before initial measurements or adjustments.

36. B — Direct TPMS sensor batteries have a typical service life of 5–10 years. When a sensor stops reporting, battery failure is the most common cause — especially on vehicles 7+ years old. Pressure thresholds don't typically deactivate sensors; module programming and wheel speed sensors are less common causes.

37. A — Torque-to-yield axle nuts are single-use fasteners designed to stretch during their initial torque cycle to achieve precise preload. Reusing a TTY nut cannot produce proper clamping force because the stretch has already occurred. Always install a new TTY nut per specification — this is non-negotiable.

38. C — The maximum safe pressure for seating tire beads during mounting is 40 psi for standard passenger tire applications. Exceeding this risks sudden bead failure that can cause catastrophic injury. If beads won't seat at 40 psi or less, dismount and investigate — don't over-pressurize. This is a documented shop safety requirement.

39. D — The aspect ratio is the sidewall height expressed as a percentage of the section width. In "P215/55R17," the 55 means sidewall height is 55% of 215mm section width, or approximately 118mm. This is the standard tire-size designation interpretation used in all passenger tire codes globally.

40. B — Dynamic imbalance requires correction in two planes — both the inner and outer rim edges — because the imbalance creates a force couple that cannot be corrected at a single plane. Modern balancers detect dynamic imbalance and specify weights at both rim edges. Static imbalance alone requires single-plane correction; dynamic requires two-plane.