PRACTICE EXAM 14 SIMULATION

1. A specialist quotes a part in 30 seconds without verifying the request, then spends 45 minutes processing the return and reorder. The lesson this illustrates is that:

A. Speed at the counter always saves time overall

B. Time saved skipping verification is lost many times over on returns

C. Verification is optional for experienced specialists

D. Returns are unrelated to verification habits

2. A customer reads a 11-character part number aloud. The specialist who confirms it by repeating each character is primarily guarding against:

A. The customer changing their mind

B. A price discrepancy

C. A delivery delay

D. A transposition error in the number

3. A specialist serves four channels in an hour: counter, phone, email, and chat. The constant across all four is that each requires:

A. The same response speed

B. The same written record

C. A different set of vehicle facts

D. The same vehicle and component information

4. A customer is angry about a wrong part costing two days of downtime. Weighing the responses, the most effective is the one that:

A. Quotes the correct price first

B. Recites the return policy

C. Acknowledges the impact, then moves to the fix

D. Identifies who is at fault first

5. Over a month, a counter logs 40 completed sales and 12 unfilled requests but records only the 40. The missing data most directly harms:

A. The commission calculation

B. The stocking decisions for future demand

C. The completed-sale totals

D. The core refund accounting

6. A customer says "it's a 2022 truck" and nothing more. Of the data still needed, the single most decisive for one correct part is the:

A. Cab paint color

B. VIN and drivetrain details

C. Fleet decal number

D. Tire brand

7. A specialist resolves a complaint and later calls to confirm the fix held. Weighed against the alternatives, this follow-up most strongly:

A. Builds trust that retains the account

B. Voids the manufacturer warranty

C. Replaces the need to document the sale

D. Increases the core charge

8. A clutch disc sells for $140, the pressure plate $160, the release bearing $40, and the pilot bearing $20. A customer who buys only the disc to "save money" but calls the tech back mid-job most likely loses more than $220 because:

A. The disc price will rise

B. The core charge applies

C. Downtime and a second trip cost more than the companion parts

D. The gear ratio changes

9. Comparing an economy water pump at $90 and a premium at $150 for a fleet running 120,000 miles a year, the premium's value case rests on:

A. The store's margin on premium parts

B. The lower sticker price

C. The customer's obligation to buy the best

D. Fewer failures and less downtime over high annual mileage

10. A reman alternator lists at $185 with a $50 core charge. A customer returns the rebuildable core. Their net cost is:

A. $235, since the core is never refunded

B. $135, since the core is subtracted from the part

C. $50, since only the core is owed

D. $185, since the core deposit is refunded

11. Among OE, OES, and economy aftermarket at $220, $175, and $110, a customer wanting OE-level quality at the best price should be guided to the:

A. $110 economy part

B. $175 OES part

C. $220 OE part only

D. A salvage part of unknown cost

12. A drum brake job needs shoes ($120/axle), a hardware kit ($35), and possibly drums ($90 each) if worn. The most complete quote for a customer relining one axle:

A. Covers only the shoes

B. Covers shoes, hardware, and drums if measurement shows wear

C. Covers a master cylinder instead

D. Covers a steering gear box

13. A customer plans to sell a light-duty truck in 60 days. Recommending a $150 premium part over a $70 standard part that fully suits the use would be:

A. Appropriate upselling

B. Required by policy

C. Overselling, since the premium serves the sale not the need

D. Impossible to fit

14. A reman starter at $95 versus a new one at $210, both rebuilt or built to specification. The accurate framing of the reman option is that it offers:

A. An untested part with no standard

B. Inferior performance to new

C. Comparable spec-rebuilt performance at lower cost, with a core

D. A higher total once the core is added

15. A customer makes six parts trips a week across town. The service most genuinely valuable to promote is:

A. A premium part they don't need

B. The operation's delivery service

C. A longer warranty on an unrelated item

D. An after-hours policy with no benefit

16. Two trucks of the same model need front friction: a highway sleeper and a local dump truck. The correct quoting approach reflects that:

A. Both get identical economy parts

B. Both get the cheapest grade

C. The dump truck needs the severe-service grade for its heat and load

D. Neither can be quoted without scrapping the model data

17. A medium-duty truck's complaint cites "low brake fluid." This single fact most decisively tells the specialist the truck has:

A. An air brake system with spring chambers

B. A walking-beam suspension fault

C. A turbocharger oil leak

D. A hydraulic (or air-over-hydraulic) brake system

18. A tractor's S-cam drum brakes need friction. The customer asks for "pads." The correct part, given S-cam drums, is:

A. Disc pads, since terms match

B. Drum brake shoes and linings

C. No part, since the truck is too old

D. Whatever disc pad is in stock

19. A truck's air gauge reads zero while parked. The brake state, and the reason, is that the:

A. Spring brakes are applied, since air no longer holds the springs off

B. Brakes are fully released and the truck can roll

C. Hydraulic backup is holding the truck

D. Brakes are unaffected until restart

20. On a 30-foot-wheelbase truck, the rear brakes apply 0.3 seconds after the fronts without a certain valve. That valve, which cuts the lag, is the:

A. Master cylinder

B. Relay valve near the rear chambers

C. Cabin blend door

D. Alternator regulator

21. A combination chamber has a service section and a spring section. The spring section's stored energy provides:

A. Extra hydraulic boost for service braking

B. Parking and emergency braking when air is released

C. Current to the ABS module

D. Cooling airflow to the drum

22. Comparing the slack adjuster's two jobs, it both multiplies pushrod force and:

A. Stores compressed air

B. Reads wheel speed

C. Takes up brake lining wear

D. Regulates the alternator

23. A neglected air dryer cartridge lets moisture reach the valves. Weighing the cost, replacing a cartridge protects:

A. The more expensive downstream air valves

B. The alternator output

C. The axle gear ratio

D. The cabin air filter

24. An ABS light is on but braking is normal across all wheels. The fault almost certainly lies in the:

A. ABS sensors, tone rings, or a modulator

B. Foundation brake shoes

C. Master cylinder

D. Water pump

25. A spring brake chamber stores roughly 1,800 pounds of spring force. The implication for service is that it must be:

A. Filled with brake fluid first

B. Disassembled to gain air capacity

C. Caged before service or replaced as a sealed unit

D. Used only for service braking

26. A diesel needs 1,000 CCA to start reliably in winter, but its two batteries now test 650 CCA combined. The predictable result is:

A. Faster starting in the cold

B. Higher reserve capacity

C. Weak cranking or a no-start in cold weather

D. A higher charging output

27. A truck's alternator outputs only 60 amps but the loads demand 110 amps continuously. Over time the batteries will:

A. Overcharge and last longer

B. Discharge, eventually leaving the truck unable to start

C. Crank the engine faster

D. Run the HVAC blower faster

28. A 20-amp circuit's fuse keeps blowing. The specialist supplies a 20-amp fuse and advises diagnosis because installing a 30-amp fuse would:

A. Charge the battery faster

B. Cool the intake air

C. Raise the axle ratio

D. Remove protection and risk a wiring fire

29. A headlight circuit draws 15 amps; the dash switch is rated for 5 amps. The component that lets the small switch control the larger load is the:

A. Relay

B. Spring brake chamber

C. Slack adjuster

D. Receiver-drier

30. A repair on a circuit shown as 8-gauge requires wire that is:

A. 16-gauge for easy routing

B. Any gauge that fits

C. 8-gauge or heavier to carry the load

D. Uninsulated to shed heat

31. A truck clicks once at the key with batteries at full charge and no crank. The most probable failed component is the:

A. Diesel particulate filter

B. Starter solenoid

C. Cabin air filter

D. Charge-air boot

32. A truck cranks slowly; batteries test 100% and cables are clean and tight. The next logical suspect is the:

A. Diesel particulate filter

B. Front-end alignment

C. Cabin air filter

D. Starter motor

33. A driveshaft turns 4.10 times per wheel revolution on one drive axle and 3.55 on the other. Installed on the same tandem, the predictable result is:

A. Driveline binding, heat, and damage from the ratio mismatch

B. Improved fuel economy

C. Better cab heating

D. Higher battery output

34. A U-joint flexes through an angle thousands of times per mile. Compared with other driveline parts, this makes it:

A. One of the most commonly replaced wear items

B. A maintenance-free lifetime part

C. Irrelevant to vibration complaints

D. A part that sets the gear ratio

35. A customer's AMT needs clutch parts. Pricing a torque-converter rebuild would be wrong because an AMT uses a:

A. Torque converter and planetary gears

B. Friction clutch operated by actuators

C. Belt-and-pulley CVT

D. Hydraulic coupling only

36. Comparing a 4.56 and a 3.42 axle ratio for a loaded vocational truck, the 4.56 is correct because it:

A. Multiplies torque more for startability under load

B. Gives the best highway fuel economy

C. Lowers torque to the wheels

D. Reduces engine speed at cruise

37. A specialist must quote a carrier for one axle of a tandem geared 4.10. The replacement carrier must be:

A. Numerically higher than 4.10

B. Numerically lower than 4.10

C. Any ratio, since it's independent

D. Also 4.10 to match the opposite axle

38. A clutch rated for 1,250 lb-ft is installed on an engine producing 1,650 lb-ft. The predictable outcome is:

A. The clutch outlasts the engine

B. Premature clutch failure under the excess torque

C. Improved fuel economy

D. A change in the gear ratio

39. A driveshaft must shorten and lengthen as the axle moves over bumps. The component providing this is the:

A. Universal joint

B. Slip joint (slip yoke)

C. Ring and pinion

D. Pitman arm

40. A service order lists "torque converter, transmission fluid, and filters." Reading the numbers and parts together, the transmission is:

A. A fully automatic

B. A manual with a friction clutch

C. A non-synchronized crash box

D. An AMT with a clutch pedal

41. An air-suspension tractor sits 2.5 inches low at the right rear while level elsewhere. The single most probable faulty component is the:

A. Engine oil cooler

B. Diesel particulate filter

C. Height control (leveling) valve

D. Power steering pump

42. A vocational tandem keeps both axles loaded over rough ground via a rigid pivoting beam. This identifies a:

A. Pure air-bag suspension

B. MacPherson strut suspension

C. Coil-spring suspension

D. Walking-beam suspension

43. A truck shows 0.25 inch of play at the steer wheel and wanders. The first high-wear linkage part to inspect is the:

A. Tie rod ends

B. Radiator cap

C. Oil filter

D. Brake drum

44. A truck wanders and wears front tires unevenly though the tie rod ends are tight. The next component, sold as a matched set, is the:

A. Cabin air filter

B. Transmission torque converter

C. Exhaust muffler

D. Kingpins and bushings

45. Steer tires are cupping and feathering rapidly. The alignment angle most directly responsible, adjusted at the tie rod, is:

A. Caster

B. Camber

C. Ride height

D. Toe

46. A kingpin set quoted for a 12,000-lb front axle must match that axle because:

A. Kingpins are universal across all axles

B. The set includes only the pins

C. Front axles vary in make and capacity

D. Kingpin sets are never sold complete

47. A customer buying spring shackles, control-arm pivots, and torque-rod ends is really buying multiple instances of one wear component: the:

A. Wheel speed sensor

B. Fuel injector

C. Brake chamber

D. Bushing

48. A truck loses 1 quart of coolant per week, fogs the windshield, and smells sweet inside. The single part explaining all three symptoms is the:

A. Evaporator

B. Heater core

C. Condenser

D. Receiver-drier

49. An A/C compressor job opens the refrigerant system. Beyond the compressor, the parts that must accompany it are the:

A. Front leaf spring and shackle

B. Clutch disc and pressure plate

C. Receiver-drier with correct refrigerant and oil

D. Brake drum and shoes

50. A newer truck's underhood label shows neither R-12 nor R-134a. The refrigerant it most likely specifies is:

A. R-22 household refrigerant

B. Engine coolant

C. Diesel exhaust fluid

D. R-1234yf

51. A truck delivers zero airflow on every fan setting and in every mode. The single shared component explaining this is the:

A. A/C compressor clutch

B. Heater control valve

C. Blower motor

D. Expansion valve

52. Inside the HVAC case, the part that both cools and removes humidity from the cab air is the:

A. Heater core

B. Condenser at the front

C. Evaporator

D. Power steering reservoir

53. A diesel produces no spark and needs none. The reason it still ignites fuel is:

A. The heat of highly compressed air in the cylinder

B. A spark fired by an ignition coil

C. A continuously energized glow plug

D. An electric arc from the alternator

54. An inframe overhaul kit lists liners, pistons, rings, and bearings. The remaining essential component, completing an in-chassis rebuild, is the:

A. Complete aftertreatment system

B. New automatic transmission

C. Truck's batteries and starter

D. Set of gaskets

55. A diesel's injectors failed after a tank of water-contaminated fuel. The companion part essential to prevent a repeat is the:

A. Cabin air filter

B. Brake air dryer

C. Fuel filter and water separator

D. Power steering filter

56. A turbocharger raises power by packing more air into the cylinders, drawing its energy from the:

A. Engine's exhaust gases

B. Alternator's output

C. Battery's stored charge

D. Engine coolant flow

57. Compressing intake air heats it to roughly 300°F; the charge-air cooler drops it well below that. The benefit of this cooling is:

A. Filtering soot from the exhaust

B. Storing DEF for the SCR system

C. Lubricating the turbo bearing

D. Denser intake air for better combustion

58. A complete cooling-system service for a heavy diesel most fully includes the:

A. Clutch kit and flywheel

B. Tie rod ends and kingpins

C. DPF and SCR catalyst

D. Water pump, thermostat, coolant, hoses, and coolant filter

59. An emissions diesel requires a specific low-ash oil grade. Using a non-low-ash oil instead can:

A. Raise the cold cranking amps

B. Damage the diesel particulate filter

C. Improve the air conditioning

D. Change the axle gear ratio

60. A truck consumes DEF at roughly 2–3% of fuel use. This consumable is injected by the:

A. EGR system into the intake

B. Lubrication system into the crankcase

C. SCR system into the exhaust

D. Cooling system into the radiator

61. Among the aftertreatment components, the one that traps soot and burns it off through regeneration is the:

A. Diesel oxidation catalyst

B. EGR cooler

C. Diesel particulate filter (DPF)

D. SCR catalyst

62. A turbo replaced two weeks ago has failed again. Reading the pattern, the most probable unaddressed cause involves the:

A. Oil supply or charge-air system feeding the turbo

B. Front brake friction material

C. Cabin air filter element

D. Steering tie rod ends

63. The EGR system lowers NOx by recirculating exhaust, which reduces:

A. The alternator output

B. The brake air pressure

C. The axle gear ratio

D. The peak combustion temperature

64. A shop buys 20 filters at $5 and 20 at $7, then sells 20 under FIFO. The cost of goods sold for those 20 totals:

A. $100 (20 × $5)

B. $140 (20 × $7)

C. $120 (a blended average)

D. The lowest cost recorded

65. A part sells 8 units per week with a 2-week lead time and a 10-unit safety stock. The reorder point is:

A. 8 units

B. 16 units

C. 26 units

D. 10 units

66. A department fills 360 of 400 requested lines from stock. Its fill rate is:

A. 90%

B. 40%

C. 10%

D. 100%

67. A manager orders 200 units when the EOQ is 80. Compared with ordering the EOQ, this larger order:

A. Reduces total inventory cost

B. Raises holding cost from excess inventory

C. Eliminates ordering cost

D. Guarantees a 100% fill rate

68. A cycle count of a bin shows 92 units; the system shows 100. The 8-unit difference, recorded as shrinkage, represents:

A. Inventory lost to theft, damage, or error

B. A supersession of the part

C. A core credit owed

D. The economic order quantity

69. A shop buys 15 pumps at $80 and 15 at $100, then sells 15 under LIFO. The cost of goods sold for those 15 totals:

A. $1,500 (15 × $100)

B. $1,200 (15 × $80)

C. $1,350 (a blended average)

D. The lowest cost recorded

70. A bin of returnable cores worth $40 each sits unshipped past the 60-day return window. The financial result is:

A. The cores appreciate in value

B. The credit is forfeited, a direct loss

C. The cores become staff property

D. The original sales are voided

Answer Key & Explanations

1. B — Time saved skipping verification is lost many times over on returns. The 30 seconds saved by skipping verification became 45 minutes of returns and reorders. Verification is the efficient choice, not the slow one.

2. D — A transposition error in the number. Repeating each character guards against a transposed or dropped digit on a long number. Such errors are the main phone-order risk.

3. D — The same vehicle and component information. Every channel requires the same vehicle and component facts; only the gathering method differs. The information need is constant.

4. C — Acknowledges the impact, then moves to the fix. The most effective response acknowledges the downtime impact and moves to the fix, which the customer values most. Price and blame come second.

5. B — The stocking decisions for future demand. Failing to log the 12 unfilled requests hides demand the operation should stock. Lost-sale data drives stocking decisions.

6. B — VIN and drivetrain details. A model year alone narrows little; the VIN and drivetrain details produce one correct part. They are the decisive identifiers.

7. A — Builds trust that retains the account. Confirming a fix held builds the trust that retains accounts. It does not replace documentation or warranty.

8. C — Downtime and a second trip cost more than the companion parts. The $220 in companion parts is less than the cost of downtime and a second trip the omission causes. Selling the complete job is cheaper for the customer overall.

9. D — Fewer failures and less downtime over high annual mileage. The premium pump's value rests on fewer failures and less downtime across high annual mileage. For a fleet, uptime outweighs the sticker gap.

10. D — $185, since the core deposit is refunded. The $50 core charge is a refundable deposit returned with the rebuildable core, so the net cost is the $185 part price. The deposit is recovered.

11. B — The $175 OES part. The OES part offers OE-level quality at a lower price than the $220 OE part, matching the customer's priority. Economy and salvage do not meet the OE-quality requirement.

12. B — Covers shoes, hardware, and drums if measurement shows wear. A complete reline quote includes shoes, the hardware kit, and drums if measurement shows wear. This anticipates the full job.

13. C — Overselling, since the premium serves the sale not the need. A standard part fully suits a light-duty truck about to be sold, so the premium serves the sale, not the customer. That is overselling.

14. C — Comparable spec-rebuilt performance at lower cost, with a core. A reman starter is rebuilt to specification, delivering comparable performance below new with a core charge. It is not untested or inferior.

15. B — The operation's delivery service. A customer making six weekly parts trips benefits genuinely from delivery, making it valuable service promotion. The other options serve the sale, not the customer.

16. C — The dump truck needs the severe-service grade for its heat and load. Identical models in different applications need different friction grades; the dump truck's severe duty requires the higher grade. The application drives the grade.

17. D — A hydraulic (or air-over-hydraulic) brake system. "Brake fluid" signals a hydraulic system, so the truck is not on pure air brakes. Identifying the system type guides the right parts.

18. B — Drum brake shoes and linings. S-cam drums use shoes and linings, not pads, so the correct part is shoes and linings. Confirming the type prevents a wrong part.

19. A — The spring brakes are applied, since air no longer holds the springs off. With air at zero, the springs are released and apply the brakes — the fail-safe design. Air loss applies, not releases, braking.

20. B — Relay valve near the rear chambers. The relay valve supplies the rear chambers on signal, cutting the lag of air traveling the long wheelbase. It exists to reduce brake lag.

21. B — Parking and emergency braking when air is released. The spring section provides spring-applied parking and emergency braking when air is released. The service section handles normal stops.

22. C — Takes up brake lining wear. The slack adjuster multiplies pushrod force and also takes up lining wear via the S-camshaft. It does not store air or read speed.

23. A — The more expensive downstream air valves. The air dryer cartridge protects the costly downstream valves from moisture and oil. Replacing a cheap cartridge prevents expensive valve damage.

24. A — ABS sensors, tone rings, or a modulator. An ABS light with normal braking points to the ABS electronic layer, not the foundation brakes. Sensors, tone rings, and modulators are the likely parts.

25. C — Caged before service or replaced as a sealed unit. A spring brake chamber's stored force makes it dangerous to disassemble, so it is caged before service or replaced as a sealed unit. The specialist should warn against disassembly.

26. C — Weak cranking or a no-start in cold weather. With only 650 CCA against a 1,000 CCA requirement, the engine will crank weakly or fail to start in the cold. CCA is the cold-start spec.

27. B — Discharge, eventually leaving the truck unable to start. An alternator outputting 60 amps against a 110-amp demand cannot keep the batteries charged, so they discharge until the truck won't start. The charging loop must meet the load.

28. D — Remove protection and risk a wiring fire. A 30-amp fuse on a 20-amp circuit removes the protection and risks a wiring fire. The repeated blowing signals a fault to diagnose, not a fuse to upsize.

29. A — Relay. A relay lets the 5-amp switch control the 15-amp headlight load without carrying the full current. This protects the switch.

30. C — 8-gauge or heavier to carry the load. Repair wire must match or exceed the original 8-gauge to carry the load without overheating. Undersized wire overheats.

31. B — Starter solenoid. A single click with full batteries and no crank points to the solenoid failing to close the high-current circuit. The other options are unrelated.

32. D — Starter motor. With batteries at full charge and clean cables, the next slow-crank suspect is the starter motor itself. The other options don't affect cranking speed.

33. A — Driveline binding, heat, and damage from the ratio mismatch. A 4.10 and a 3.55 axle on the same tandem fight each other, causing binding, heat, and damage. Both drive axles must share the same ratio.

34. A — One of the most commonly replaced wear items. Constant flexing makes the U-joint one of the most frequently replaced driveline parts. It is far from maintenance-free.

35. B — Friction clutch operated by actuators. An AMT uses a friction clutch operated by automated actuators, not a torque converter, so a converter rebuild is wrong. It simply has no clutch pedal.

36. A — Multiplies torque more for startability under load. The numerically higher 4.56 ratio multiplies torque more, giving the startability a loaded vocational truck needs. The 3.42 favors highway economy.

37. D — Also 4.10 to match the opposite axle. Both drive axles on a tandem must share the same ratio, so the replacement carrier must also be 4.10. A mismatch causes binding and damage.

38. B — Premature clutch failure under the excess torque. A 1,250 lb-ft clutch on a 1,650 lb-ft engine is underrated and will fail early. The clutch must be rated for the engine's torque.

39. B — Slip joint (slip yoke). The splined slip joint lets the driveshaft change length as the axle moves; U-joints handle angle. The ring and pinion and pitman arm serve other roles.

40. A — A fully automatic. A torque converter with fluid-and-filter service identifies a true automatic. Manuals and AMTs use a friction clutch instead.

41. C — Height control (leveling) valve. A single corner sitting low on air suspension points to a faulty leveling valve. The valve maintains ride height regardless of load.

42. D — Walking-beam suspension. A rigid pivoting beam keeping both tandem axles loaded over rough ground defines the walking-beam design. Strut and coil designs are not used this way.

43. A — Tie rod ends. Play at the steer wheel with wander points first to worn tie rod ends, the highest-wear linkage part. They are the first suspect.

44. D — Kingpins and bushings. Wander with uneven front wear and tight tie rod ends points to worn kingpins and bushings, sold as a matched set fitted to the axle. They are the next component.

45. D — Toe. Cupping and feathering from incorrect toe is the leading alignment cause of rapid uneven wear, adjusted at the tie rod. This links worn tie rod ends to tire wear.

46. C — Front axles vary in make and capacity. A kingpin set must match the specific axle's make and capacity, so the 12,000-lb axle's set must fit it. A generic set may not fit.

47. D — Bushing. Spring shackles, control-arm pivots, and torque-rod ends all use bushings, so the customer is buying multiple instances of that one wear component. Bushings appear throughout suspension and steering.

48. B — Heater core. Coolant loss, a fogged windshield, and a sweet smell all point to a leaking heater core carrying engine coolant inside the case. One part explains all three symptoms.

49. C — Receiver-drier with correct refrigerant and oil. Opening the refrigerant system compromises the drier's desiccant, so it must accompany the compressor with fresh refrigerant and oil. Selling the compressor alone is incomplete.

50. D — R-1234yf. R-1234yf is the newest refrigerant, succeeding R-12 and R-134a. The progression runs R-12 → R-134a → R-1234yf.

51. C — Blower motor. The blower moves cab air in every mode, so its failure kills all airflow regardless of setting. It is the shared air-handling element.

52. C — Evaporator. Inside the HVAC case the evaporator cools and dehumidifies the cab air. The heater core warms; the condenser sits at the front.

53. A — The heat of highly compressed air in the cylinder. Diesels ignite fuel by the heat of highly compressed air, needing no spark. Glow plugs only aid cold starting.

54. D — Set of gaskets. An inframe kit adds the gaskets to the liners, pistons, rings, and bearings to complete an in-chassis rebuild. Aftertreatment and transmissions are separate.

55. C — Fuel filter and water separator. Water-contaminated fuel destroys injectors, so the fuel filter and water separator are essential to prevent a repeat. Dirty fuel is what killed the old injectors.

56. A — Engine's exhaust gases. The turbocharger draws its energy from the exhaust gases to spin a turbine that drives the compressor. It does not use the alternator, battery, or coolant.

57. D — Denser intake air for better combustion. Cooling the heated compressed air raises its density for better combustion. Denser intake air supports more efficient power.

58. D — Water pump, thermostat, coolant, hoses, and coolant filter. A complete cooling service bundles the pump, thermostat, coolant, hoses, and coolant filter, which are serviced together. This anticipates the full job.

59. B — Damage the diesel particulate filter. Emissions diesels require low-ash oil; a non-low-ash oil can harm the DPF. Matching the specification protects the aftertreatment.

60. C — SCR system into the exhaust. DEF is injected by the SCR system into the exhaust to reduce NOx. It is not an intake, crankcase, or coolant additive.

61. C — Diesel particulate filter (DPF). The DPF traps soot and regenerates by burning it off. The DOC oxidizes pollutants and the SCR reduces NOx.

62. A — Oil supply or charge-air system feeding the turbo. A repeat turbo failure usually means an unaddressed oil-supply or charge-air problem. Fixing the cause prevents another failure.

63. D — The peak combustion temperature. EGR recirculates exhaust to lower the peak combustion temperature, which reduces NOx formation. It does not affect the alternator, brakes, or ratio.

64. A — $100 (20 × $5). Under FIFO the first 20 units in (at $5) are sold first, so COGS is 20 × $5 = $100. The newer $7 units remain in inventory.

65. C — 26 units. At 8 units per week over a 2-week lead time, lead-time demand is 16 units, plus the 10-unit safety stock, giving a reorder point of 26. The reorder point covers lead-time demand plus safety stock.

66. A — 90%. Filling 360 of 400 lines is 360 ÷ 400 = 0.90, a 90% fill rate. Fill rate measures the share of demand met from stock.

67. B — Raises holding cost from excess inventory. Ordering 200 against an EOQ of 80 ties up excess inventory, raising holding cost. EOQ balances ordering against holding cost.

68. A — Inventory lost to theft, damage, or error. The 8-unit shortfall between count (92) and system (100) is shrinkage from theft, damage, or error. Cycle counts surface it.

69. A — $1,500 (15 × $100). Under LIFO the most recently purchased 15 units (at $100) are sold first, so COGS is 15 × $100 = $1,500. The $80 units remain in inventory.

70. B — The credit is forfeited, a direct loss. Cores left past the 60-day window forfeit their credit, a direct loss of $40 each. They must be returned within the program window.