

# PRACTICE EXAM 12

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1. A customer's vehicle could have one of two engines, and the catalog returns ambiguous results. What is the most reliable way to settle which parts apply?

- A. Assume the higher-output engine for safety
- B. Sell parts for both engines and let the customer choose
- C. Confirm the engine using the VIN or component markings
- D. Decline to look up the part any further

2. A part costs the store \$96 and is priced to a 20% gross margin. What is the selling price?

- A. \$115.20, the cost plus a markup
- B. \$76.80, the cost reduced by a factor
- C. \$80.00, the cost divided by 1.20
- D. \$120.00, the cost divided by 0.80

3. Parts Specialist A says a counter ticket records a parts sale only. Parts Specialist B says a repair order includes both parts and labor. Who is correct?

- A. A only
- B. Neither A nor B
- C. B only
- D. Both A and B

4. A customer's brakes pull to one side under braking with an otherwise normal pedal. Which hydraulic-side cause is most likely?

- A. Air trapped in the brake lines
- B. A sticking or seized caliper at one wheel
- C. The radiator cap pressure rating
- D. The mass airflow sensor reading

5. A customer doing a front disc brake job buys pads and rotors. Which items complete the job?

- A. A new battery and terminal cleaner
- B. The hardware kit, caliper lubricant, and brake cleaner
- C. A serpentine belt and tensioner
- D. A cabin air filter and washer fluid

6. Which describes the difference between markup and margin?

- A. Both are figured on the selling price identically
- B. They always produce the same percentage
- C. Markup is figured on the price, margin on the cost
- D. Markup is figured on cost, margin on the selling price

7. A customer's vehicle uses a CVT and wants to add conventional ATF. What should the specialist advise?

- A. Conventional ATF works in all CVTs
- B. Add ATF only if the CVT is older
- C. Top off halfway to dilute the difference
- D. A CVT requires dedicated CVT fluid; do not use ATF

8. A customer's clicking noise occurs only when turning a front-wheel-drive car. Which component and root cause should the specialist consider?

- A. A worn U-joint on a driveshaft
- B. A worn CV joint, often due to a torn boot
- C. A failing alternator overcharging
- D. A clogged fuel filter restricting flow

9. A customer's vehicle requires AGM but they want a flooded battery. What is the BEST explanation of the concern?

- A. Flooded batteries are illegal for cars
- B. The vehicle's charging and durability needs may not be met by flooded
- C. The two types are completely identical
- D. The flooded battery cannot fit any tray

10. Which describes the function of the master cylinder?

- A. It boosts pedal effort using engine vacuum
- B. It prevents wheel lockup during braking
- C. It converts pedal force into hydraulic pressure
- D. It holds the vehicle stationary when parked

11. A customer's vehicle has electric power steering and requests fluid. What is the correct response?

- A. Explain the system uses no fluid; it is electrically assisted
- B. Recommend a universal power steering fluid
- C. Sell automatic transmission fluid as a substitute
- D. Tell the customer the fluid is dealer-only

12. A part is listed "sold each" for a front brake job covering two wheels. How many pads should be ordered?

- A. One, since the listing covers the job
- B. Four, two for each of the two front wheels
- C. Two, one for the entire axle
- D. Three, with one as a spare

13. A customer's vehicle uses R-1234yf and asks if R-134a can be added. What is correct?

- A. Yes, the two are fully interchangeable
- B. Yes, if only a small amount is added
- C. No, the refrigerants are not interchangeable
- D. Only if the system is first drained of oil

14. A customer's growling front-end noise rises with speed and worsens in turns. Which component is implicated?

- A. A worn wheel bearing or sealed hub
- B. The catalytic converter heating up
- C. A misfiring fuel injector
- D. A slipping serpentine belt

15. Which engine configuration places the camshaft in the block and operates valves through pushrods?

- A. DOHC, dual overhead cam
- B. SOHC, single overhead cam
- C. OHV, overhead valve
- D. A flat or boxer layout

16. Which describes the correct order of operations for an invoice with a discount and tax?

- A. Add tax to each line before extending
- B. Apply the discount after tax is added
- C. Add tax first, then apply the discount
- D. Extend lines, subtotal, apply discount, then add tax

17. A customer's old part number was superseded. What should the specialist provide?

- A. A refund for the inconvenience
- B. The current replacement the supersession points to
- C. The discontinued number with no substitute
- D. A part from an unrelated vehicle

18. A customer's vehicle has a stuck-closed thermostat. Which symptom would this most likely produce?

- A. The engine runs too cool and warms slowly
- B. The battery fails to hold a charge
- C. The engine overheats due to blocked coolant flow
- D. The fuel economy improves dramatically

19. A customer provides only year, make, and model for a part that varies by trim. What should the specialist do FIRST?

- A. Confirm the trim level or submodel before selecting
- B. Sell the base-trim part as the default
- C. Sell parts for all trims and accept returns
- D. Decline the sale because trim is unknown

20. Which sensor measures the air entering the engine for fuel metering?

- A. The oxygen sensor in the exhaust
- B. The coolant temperature sensor
- C. The crankshaft position sensor
- D. The mass airflow sensor in the intake

21. A customer doing a clutch job asks what parts go together. Which set is correct?

- A. The radiator and the water pump
- B. The fuel pump and in-tank filter
- C. The front struts and strut mounts
- D. The disc, pressure plate, and release bearing

22. A customer's special order has arrived at the store. What should the specialist do?

- A. Place it directly into general sellable stock
- B. Return it to the supplier the same day
- C. Notify the customer promptly that it arrived
- D. Apply a higher markup than was quoted

23. Which describes the correct handling of a store-use item from inventory?

- A. Leave it unrecorded since the store owns it
- B. Record it as store-use and charge the proper account
- C. Ring it up as a full-price retail sale
- D. Treat it as shrinkage at year-end

24. A customer with a limited-slip differential reports chatter in turns. What is the likely cause?

- A. The differential cover gasket is leaking
- B. The gear oil lacks the required friction modifier
- C. The gear oil viscosity is too low
- D. The axle tag is missing from the housing

25. A customer needs a wheel and gives only the diameter. What else must be matched?

- A. The bolt pattern, offset, and center bore
- B. The color and finish of the wheel
- C. The brand of the original equipment wheel
- D. The recommended tire pressure

26. Which forced-induction device is driven by exhaust gas energy?

- A. The turbocharger, driven by exhaust gas
- B. The supercharger, belt-driven by the engine
- C. The intercooler, cooling the charge air
- D. The throttle body, metering the airflow

27. A customer's vehicle has a wheel speed sensor fault triggering an ABS light. What does the sensor read?

- A. The brake fluid level in the reservoir
- B. The temperature of the rotor surface
- C. The pressure in the master cylinder
- D. The toothed tone or reluctor ring

28. Which VIN position holds the calculated check digit?

- A. Position 10, the model year
- B. Position 9, the check digit
- C. Position 1, the country of origin
- D. Position 11, the assembly plant

29. A customer doing rear drum brakes asks what to replace with the shoes. What is correct?

- A. The front rotors and calipers
- B. The radiator hoses and thermostat
- C. The drum hardware kit and often the wheel cylinder
- D. The serpentine belt and tensioner

30. A customer's vehicle is all-wheel drive and needs a ring and pinion. What must match between front and rear?

- A. The gear ratios front and rear
- B. The color of the differential covers
- C. The brand of the gear oil
- D. The size of the wheels

31. Which describes the function of the PCV valve?

- A. It recirculates exhaust gas to lower combustion temperatures
- B. It senses exhaust oxygen for fuel trim
- C. It routes crankcase blow-by gases to the intake to be burned
- D. It pressurizes the fuel rail for the injectors

32. A customer needs a fuel-line hose. What must the specialist ensure?

- A. The hose matches the original line's color
- B. The hose is the cheapest rubber hose available
- C. The hose is the same as a vacuum hose
- D. The hose is fuel-rated and appropriate for the pressure

33. Which describes a torque-to-yield head bolt?

- A. A bolt that can be reused indefinitely
- B. A bolt engineered to stretch and typically single-use
- C. A bolt identical to a wheel lug nut
- D. A bolt that loosens itself during operation

34. Which describes the function of the catalytic converter and a regulatory note?

- A. It treats emissions and replacements must meet standards
- B. It quiets the exhaust and is unregulated
- C. It measures airflow and is sold freely
- D. It pressurizes fuel and faces no regulation

35. A customer's vehicle has TPMS and is getting new tires. Which related item and step should the specialist mention?

- A. A new catalytic converter and oxygen sensors
- B. A timing belt kit and water pump
- C. A brake fluid flush and master cylinder
- D. The TPMS service kit and a sensor relearn

36. A customer is upset about a part that failed early. What is the most professional first response?

- A. Listen fully to the concern before offering a solution
- B. Tell the customer the failure was their fault
- C. Refuse to discuss it without a manager
- D. State that the warranty does not apply

37. Which describes the function of the thermostat?

- A. It regulates coolant flow to control engine temperature
- B. It maintains system pressure to raise the boiling point
- C. It stores excess coolant during expansion
- D. It filters debris from the coolant

38. A customer's vehicle could use port or direct injection. Which identifier resolves the type?

- A. The tire size on the vehicle
- B. The exterior paint code
- C. The customer's fuel-economy memory
- D. The engine information decoded from the VIN

39. Which describes the function of the alternator?

- A. It converts engine rotation into electrical current
- B. It stores electrical energy for starting
- C. It cranks the engine over to start it
- D. It steps up voltage to fire the plugs

40. A customer's rotor is below its minimum thickness. What should the specialist advise?

- A. The rotor can be resurfaced once more
- B. The rotor must be replaced rather than resurfaced
- C. The rotor only needs new pads installed
- D. The rotor is fine if it shows no cracks

41. Which describes the difference between a gasket and a seal?

- A. A gasket seals a static joint; a seal seals a moving part
- B. A gasket seals a moving part; a seal seals a static joint
- C. Both seal only rotating shafts identically
- D. Neither is used to prevent leaks in an engine

42. Which battery rating measures the ability to deliver starting current in cold conditions?

- A. Reserve capacity, the sustained-load duration
- B. Group size, the physical dimension class
- C. Cold cranking amps, the cold-start rating
- D. Amp-hours, the total stored energy

43. A customer's vehicle has a coil-on-plug ignition and asks for plug wires. What should the specialist explain?

- A. The wires are sold with new spark plugs only
- B. The wires must be measured for length first
- C. The wires are a dealer-only special order
- D. The engine has no plug wires; it uses individual coils

44. Which describes the purpose of reporting a lost sale?

- A. To trigger an automatic customer refund
- B. To capture demand data guiding stocking decisions
- C. To document an employee for discipline
- D. To reduce the recorded inventory value

45. A part costs \$50 and is marked up 30%. What is the selling price?

- A. \$35.00, the cost reduced by 30 percent
- B. \$65.00, the cost plus the 30 percent markup
- C. \$71.43, the cost divided by 0.70
- D. \$15.00, the markup amount alone

46. Which describes the difference between a strut and a plain shock absorber?

- A. A shock is structural; a strut only dampens
- B. Both are non-structural dampers
- C. A strut is structural and load-bearing; a shock only dampens
- D. Neither contains any damping fluid

47. Which describes why color is not a reliable guide to coolant type?

- A. Manufacturers dye different chemistries similar colors
- B. All coolants are the same universal green
- C. Coolant loses its color after a month
- D. Color changes permanently when mixed with water

48. A customer needs the most precise way to begin a catalog lookup. Which is it?

- A. The customer's description of the symptom
- B. Entering the VIN to resolve exact specifications
- C. Browsing by part category alone
- D. The make and model with no other detail

49. Which describes the correct response when a blade fuse keeps blowing?

- A. Install a higher-rated fuse so it stops blowing
- B. Replace it with the same rating and address the cause
- C. Remove the fuse to keep the circuit powered
- D. Bridge the fuse terminals with foil

50. A customer's vehicle requires a European oil approval. Besides viscosity, what must match?

- A. The color of the oil in the bottle
- B. The size of the oil container
- C. The specific manufacturer approval or specification
- D. The brand the customer used last

51. Which component physically turns the engine over during starting?

- A. The alternator charging the battery
- B. The starter motor engaging the flywheel ring gear
- C. The ignition coil firing the plugs
- D. The catalytic converter treating exhaust

52. A customer's drum exceeds its maximum diameter specification. What should the specialist advise?

- A. Replace the drum rather than resurface it
- B. Machine the drum once more to clean it
- C. Install only new return springs
- D. Leave it if the shoes still have material

53. Which describes the correct disclosure timing for a non-returnable policy?

- A. Only after the customer attempts the return
- B. At the time of sale, before the purchase is completed
- C. Through a mailed notice weeks afterward
- D. Never, since all parts are returnable

54. Which component allows the driven wheels to rotate at different speeds in a turn?

- A. The torque converter coupling the engine
- B. The differential splitting power between wheels
- C. The transfer case splitting power front to rear
- D. The clutch disc engaging the transmission

55. A customer describes a part using slang. What skill must the specialist apply?

- A. Selling the most expensive option
- B. Guessing without confirming the vehicle
- C. Translating the slang into catalog terminology
- D. Refusing the sale until the customer learns the term

56. Which describes the function of the receiver-drier in an air conditioning system?

- A. It compresses the refrigerant to high pressure
- B. It releases the refrigerant's heat outside
- C. It removes moisture from the circulating refrigerant
- D. It absorbs cabin heat at the evaporator

57. Which describes the correct receiving action when a shipment is short two items?

- A. Shelve the parts and adjust the count from memory
- B. Document the shortage as a discrepancy for resolution
- C. Accept the shipment as complete to avoid delay
- D. Discard the packing slip since parts are in stock

58. Which steering design uses a pinion gear moving a toothed rack and tie rods?

- A. Recirculating-ball steering with a pitman arm
- B. Worm-and-roller steering on older trucks
- C. Cable-and-pulley steering in light utilities
- D. Rack-and-pinion steering, common on modern vehicles

59. A customer wants the longest-lasting spark plug for highway driving. Which electrode material lasts longest?

- A. Copper-core, the shortest-life option
- B. A standard organic-tipped plug
- C. Any plug, since material has no effect
- D. Iridium, known for the longest service life

60. Which describes the function of the oxygen sensor?

- A. It measures exhaust oxygen so the computer adjusts fuel
- B. It physically filters soot from the exhaust
- C. It reduces the exhaust noise level
- D. It recirculates exhaust into the intake

61. A customer disposing of old oil and antifreeze asks if they can go in the trash. What is correct?

- A. They can be thrown out once cooled
- B. They can be poured down a household drain
- C. There are no rules governing disposal
- D. They are regulated wastes and must be recycled

62. Which describes the correct meaning of "OE" or "OEM"?

- A. An overseas economy parts grade
- B. An older equipment model designation
- C. Original Equipment / Original Equipment Manufacturer
- D. An optional equipment marking

63. A customer's vehicle ran cool with a weak heater, traced to a thermostat. Which failure causes running cool?

- A. A thermostat stuck closed, blocking flow
- B. A radiator cap stuck open
- C. A water pump impeller failure
- D. A thermostat stuck open, allowing constant coolant flow

64. All of the following are typically replaced together in a timing belt service EXCEPT:

- A. The timing belt tensioner
- B. The idler pulleys behind the cover
- C. The water pump driven by the belt
- D. The catalytic converter in the exhaust

65. Which describes the function of the radiator cap?

- A. It senses coolant temperature for the fan
- B. It directs flow toward the heater core
- C. It maintains pressure, raising the coolant's boiling point
- D. It filters debris from the coolant

66. A customer's vehicle leaks from a rotating shaft at the front of the engine. Which component is involved?

- A. The valve cover gasket
- B. The oil pan gasket
- C. The front crankshaft seal
- D. The intake manifold gasket

67. A part costs \$120 and is sold for \$150. What is the markup percentage?

- A. 25 percent, profit relative to cost
- B. 20 percent, profit relative to selling price
- C. 80 percent, cost relative to price
- D. 125 percent, price relative to cost

68. Which describes the function of the EGR valve?

- A. It routes crankcase blow-by to the intake
- B. It measures exhaust oxygen for fuel trim
- C. It pressurizes the fuel rail
- D. It recirculates exhaust gas to lower combustion temperatures

69. A customer's vehicle has an electronic parking brake and needs rear brakes. What should the specialist note?

- A. The rear brakes never need service
- B. The parking brake cable must always be replaced
- C. The rear brakes use only drum shoes
- D. A scan tool is typically needed to retract the caliper pistons

70. A customer needs touch-up paint and gives only the color name. Why is this insufficient?

- A. The color is never available in the aftermarket
- B. Color names always match across manufacturers
- C. A manufacturer may offer several shades with different codes
- D. Touch-up paint cannot be matched to any vehicle

71. A customer's vehicle has a part that varies by production date. Which source gives the actual build date?

- A. The driver's-side door jamb certification label
- B. The model year decoded from the VIN
- C. The customer's purchase receipt
- D. The tread surface of the spare tire

72. Which describes the correct meaning of the catalog abbreviation "ASSY"?

- A. The part is sold individually as each
- B. The part is not available
- C. The part is supplied as a complete assembly
- D. The part is a standard configuration

73. A customer's brake fluid is DOT 5 silicone but the system specified DOT 5.1. Why is this a problem despite the similar numbers?

- A. The numbers indicate only container size
- B. DOT 5 is silicone and DOT 5.1 is glycol-based; they are incompatible
- C. The two are identical fluids
- D. Brake fluid type has no effect

74. A part costs \$72 and is priced to a 25% gross margin. What is the selling price?

- A. \$90.00, the cost plus a markup
- B. \$54.00, the cost reduced by a factor
- C. \$96.00, the cost divided by 0.75
- D. \$57.60, the cost divided by 1.25

75. Which catalog resource cross-references a part number across different brands?

- A. An interchange list
- B. The lost-sales reporting log
- C. The physical inventory count sheet
- D. The seasonal merchandising plan

76. A customer's engine overheats only at idle and in slow traffic but runs normal on the highway. Which component failure best explains this?

- A. A stuck-closed thermostat blocking all flow
- B. A leaking upper radiator hose
- C. A failed electric cooling fan
- D. A loose serpentine belt

77. Which describes the function of a wear indicator on a brake pad?

- A. It increases the pad's friction coefficient
- B. It disables the brakes when the pad is new
- C. It improves the pad's heat resistance
- D. It produces a squeal warning the pad is worn

78. A customer reused torque-to-yield head bolts and now has a head gasket leak. Why did reusing the bolts contribute?

- A. The bolts were the wrong thread pitch
- B. The gasket was installed upside down
- C. The bolts were too long for the holes
- D. TTY bolts stretch once and lose proper clamping when reused

79. A customer's vehicle has an interference engine with an overdue timing belt. Why is timely replacement critical?

- A. A failed belt can let pistons strike open valves, causing damage
- B. A failed belt only affects the air conditioning
- C. The belt has no effect on engine operation
- D. The belt is purely a cosmetic component

80. A specialist applies a 20% discount to a \$250 part on a tax-exempt account. What is the amount due?

- A. \$200.00, the discounted price with no tax
- B. \$270.00, the price plus tax
- C. \$312.50, the price divided by a factor
- D. \$254.00, tax applied before discount

81. A customer's vehicle has a stuck-open thermostat. What symptom would this most likely produce?

- A. The engine overheats from no coolant flow
- B. The battery drains overnight
- C. The fuel pump fails to prime
- D. The engine runs too cool and warms slowly

82. A customer's clutch slips after only the disc was replaced and a worn flywheel was left. Why did leaving the flywheel cause slipping?

- A. A worn or scored flywheel prevents proper clutch engagement
- B. The disc was the wrong friction material
- C. The pressure plate was installed backward
- D. The release bearing was too large

83. Which describes the function of the brake booster?

- A. It converts pedal force into hydraulic pressure
- B. It assists pedal effort, usually via engine vacuum
- C. It prevents wheel lockup during braking
- D. It holds the vehicle stationary when parked

84. A customer's invoice total was wrong because tax was applied before the discount. What is the correct order?

- A. Extend lines, subtotal, apply discount, then add tax
- B. Add tax first, then discount, then subtotal
- C. Apply discount to each line before extending
- D. Add tax to each line before subtotalling

85. A part costs \$48 and is marked up 25%. What is the selling price?

- A. \$36.00, the cost reduced by 25 percent
- B. \$64.00, the cost divided by 0.75
- C. \$60.00, the cost plus the 25 percent markup
- D. \$12.00, the markup amount alone

## Answer Key & Explanations

1. C — Confirm the engine using the VIN or component markings. When the catalog is ambiguous between two engines, confirming via the VIN or the installed component's markings settles it. Assuming or selling both is improper.

2. D — \$120.00, the cost divided by 0.80. Pricing to a 20% margin divides cost by  $(1 - 0.20)$ :  $\$96 \div 0.80 = \$120$ . Margin is figured on the selling price.

3. D — Both A and B. A counter ticket records a parts sale only, and a repair order includes both parts and labor; both statements are correct. The two documents differ in scope.

4. B — A sticking or seized caliper at one wheel. A pull to one side under braking with a normal pedal commonly indicates a sticking or seized caliper applying unevenly. The other components are unrelated to braking balance.

5. B — The hardware kit, caliper lubricant, and brake cleaner. A proper front disc brake job pairs pads and rotors with the hardware kit, caliper lubricant, and brake cleaner. New pads on worn hardware can stick and squeal.
6. D — Markup is figured on cost, margin on the selling price. Markup expresses profit as a percentage of cost, while margin expresses it as a percentage of selling price. They reference the same profit dollars differently.
7. D — A CVT requires dedicated CVT fluid; do not use ATF. A continuously variable transmission requires its dedicated fluid and cannot use conventional ATF, even to top off. The wrong fluid can cause damage.
8. B — A worn CV joint, often due to a torn boot. A clicking noise only when turning a front-wheel-drive car classically indicates a worn CV joint, frequently caused by a torn boot. The lost grease and contamination wear the joint.
9. B — The vehicle's charging and durability needs may not be met by flooded. A vehicle specifying AGM may not be properly served by a flooded battery. The battery type must match the specification.
10. C — It converts pedal force into hydraulic pressure. The master cylinder converts the driver's pedal force into hydraulic pressure sent to each wheel. The booster, ABS unit, and parking brake serve other roles.
11. A — Explain the system uses no fluid; it is electrically assisted. An electric power steering system uses no fluid, so the request signals a need to clarify the system. Selling any fluid for an EPS vehicle would be incorrect.
12. B — Four, two for each of the two front wheels. A pad listing "sold each" for a two-wheel front brake job requires four pads. Reading the packaging basis prevents a quantity error.
13. C — No, the refrigerants are not interchangeable. R-1234yf and R-134a are different, non-interchangeable refrigerants, and mixing them can damage the system. The specified refrigerant must be used.

14. A — A worn wheel bearing or sealed hub. A growling noise that rises with speed and worsens in turns is classic for a worn wheel bearing, since cornering shifts the load. The other components do not produce that symptom.

15. C — OHV, overhead valve. An overhead valve (OHV) engine places the camshaft in the block and operates the valves through pushrods. SOHC and DOHC place the cam(s) in the head.

16. D — Extend lines, subtotal, apply discount, then add tax. The correct invoice order is to extend each line, subtotal, apply the discount, then add tax. Applying tax before the discount produces an incorrect total.

17. B — The current replacement the supersession points to. A superseded part number leads to a current replacement in the catalog, which the specialist should provide. The old number is not unavailable.

18. C — The engine overheats due to blocked coolant flow. A thermostat stuck closed blocks coolant flow to the radiator, causing overheating. A stuck-open thermostat, by contrast, makes the engine run too cool.

19. A — Confirm the trim level or submodel before selecting. When a part varies by trim, the specialist must confirm the trim or submodel first, since the model name alone is insufficient. Defaulting to a base trim risks a wrong part.

20. D — The mass airflow sensor in the intake. The mass airflow sensor measures the air entering the engine so the computer can meter fuel. The other sensors measure different parameters.

21. D — The disc, pressure plate, and release bearing. A clutch replacement is a kit sale: the disc, pressure plate, and release bearing are replaced together because of the shared labor. Reusing worn companions invites a comeback.

22. C — Notify the customer promptly that it arrived. When a special order arrives, the specialist should notify the customer promptly. Shelving it as general stock or returning it immediately would be incorrect.

23. B — Record it as store-use and charge the proper account. Store-use items must be recorded as store-use and charged appropriately so they leave sellable stock accurately. Unrecorded use appears as shrinkage.

24. B — The gear oil lacks the required friction modifier. A limited-slip differential that chatters in turns often lacks the friction-modifier additive its gear oil requires. Without it, the clutch packs chatter.

25. A — The bolt pattern, offset, and center bore. Beyond diameter, a wheel must match bolt pattern, offset, and center bore for proper fit. The wrong bolt pattern won't mount and the wrong offset causes clearance issues.

26. A — The turbocharger, driven by exhaust gas. A turbocharger is driven by exhaust gas energy, while a supercharger is belt-driven by the engine. Both force more air into the engine from different power sources.

27. D — The toothed tone or reluctor ring. A wheel speed sensor reads the toothed tone or reluctor ring to monitor wheel speed for the ABS. A faulty sensor commonly triggers the ABS warning light.

28. B — Position 9, the check digit. The check digit is in position 9, calculated from the other characters to detect a mistyped VIN. Position 10 is the model year.

29. C — The drum hardware kit and often the wheel cylinder. A drum brake service should replace the hardware kit and often the wheel cylinder along with the shoes. Worn springs and a leaking wheel cylinder compromise a new installation.

30. A — The gear ratios front and rear. On an all-wheel-drive vehicle, the front and rear gear ratios must match for correct operation. A mismatch causes driveline binding.

31. C — It routes crankcase blow-by gases to the intake to be burned. The PCV valve routes crankcase blow-by gases back to the intake to be re-burned, a basic emissions control. The other functions belong to different components.

32. D — The hose is fuel-rated and appropriate for the pressure. A fuel line must use fuel-rated hose appropriate for the system pressure; ordinary or vacuum hose is unsafe. This is a safety requirement.

33. B — A bolt engineered to stretch and typically single-use. A torque-to-yield head bolt is designed to stretch when torqued and is typically single-use. Reusing one risks improper clamping and head-gasket failure.

34. A — It treats emissions and replacements must meet standards. The catalytic converter treats emissions, and replacement converters must meet applicable emissions standards. A non-compliant converter can be illegal for a regulated application.

35. D — The TPMS service kit and a sensor relearn. When tires are mounted on a TPMS vehicle, the service kit is commonly replaced and the sensors may need a relearn. This is current-vehicle related-sale knowledge.

36. A — Listen fully to the concern before offering a solution. The most professional first response to an upset customer is to listen fully before moving to a solution. Blaming or refusing to engage escalates the situation.

37. A — It regulates coolant flow to control engine temperature. The thermostat opens and closes to regulate coolant flow, holding the engine at operating temperature. The cap and reservoir handle pressure and expansion.

38. D — The engine information decoded from the VIN. The VIN's engine information resolves which injection type the specific engine uses. Tire size, paint code, and customer recollection do not determine it.

39. A — It converts engine rotation into electrical current. The alternator converts mechanical engine rotation into electrical current to charge the battery. The battery stores energy and the starter uses it.

40. B — The rotor must be replaced rather than resurfaced. A rotor below its minimum thickness must be replaced, not resurfaced, to avoid overheating and failure. The spec is stamped into the rotor.

41. A — A gasket seals a static joint; a seal seals a moving part. A gasket seals between two stationary surfaces, while a seal contains a moving (rotating) part. The terms are not interchangeable.

42. C — Cold cranking amps, the cold-start rating. Cold cranking amps measures a battery's ability to deliver starting current in cold conditions. Reserve capacity and group size address other characteristics.

43. D — The engine has no plug wires; it uses individual coils. A coil-on-plug engine mounts an individual coil on each plug and has no plug wires. The request signals a need to clarify the system.

44. B — To capture demand data guiding stocking decisions. Reporting a lost sale captures demand for parts not in stock, informing future stocking decisions. An unreported lost sale leaves the store blind to that demand.

45. B —  $\$65.00$ , the cost plus the 30 percent markup. Pricing to a markup multiplies cost by 1.30:  $\$50 \times 1.30 = \$65$ . Markup is figured on cost.

46. C — A strut is structural and load-bearing; a shock only dampens. A strut is a structural, load-bearing unit combining a spring and damper, while a plain shock only dampens. This distinction matters in parts selection.

47. A — Manufacturers dye different chemistries similar colors. Color is unreliable because manufacturers dye different coolant chemistries similar colors. The specification, not the color, must guide selection.

48. B — Entering the VIN to resolve exact specifications. VIN entry is the most precise starting point because it resolves engine, trim, and build specifications that year/make/model leave ambiguous. This reduces wrong-part errors.

49. B — Replace it with the same rating and address the cause. The safe response to a repeatedly blowing fuse is to replace it with the same rating and find the underlying cause. Upsizing or bypassing defeats the protection.

50. C — The specific manufacturer approval or specification. Beyond viscosity, the oil must meet the vehicle's required manufacturer approval, common on European vehicles. Matching viscosity alone can leave the engine under-protected.

51. B — The starter motor engaging the flywheel ring gear. The starter motor physically turns the engine over by engaging the flywheel ring gear. The alternator, ignition coil, and converter perform other functions.

52. A — Replace the drum rather than resurface it. A drum worn beyond its maximum diameter specification must be replaced, not resurfaced. A too-large drum compromises braking and cannot be restored by machining.

53. B — At the time of sale, before the purchase is completed. A non-returnable policy must be disclosed at the time of sale, before the purchase, so the customer is not surprised. This prevents disputes.

54. B — The differential splitting power between wheels. The differential splits power between the driven wheels while allowing them to turn at different speeds in a corner. The torque converter, transfer case, and clutch serve other roles.

55. C — Translating the slang into catalog terminology. The specialist must translate the customer's slang into the correct catalog terminology to look up the part accurately. This bridges customer language and the catalog.

56. C — It removes moisture from the circulating refrigerant. The receiver-drier removes moisture from the refrigerant circulating through the A/C system. The compressor, condenser, and evaporator perform other functions.

57. B — Document the shortage as a discrepancy for resolution. A shipment short against the packing slip must be documented as a discrepancy for resolution before the count is corrupted. Accepting it as complete forfeits the supplier claim.

58. D — Rack-and-pinion steering, common on modern vehicles. Rack-and-pinion steering uses a pinion gear to move a toothed rack, turning the wheels through tie rods. It is the dominant modern design.

59. D — Iridium, known for the longest service life. Iridium electrodes resist wear far better than copper, giving the longest service life among common materials. This makes iridium the durability choice for highway driving.

60. A — It measures exhaust oxygen so the computer adjusts fuel. The oxygen sensor measures exhaust oxygen content so the computer can adjust the fuel mixture. It does not filter, quiet, or recirculate exhaust.

61. D — They are regulated wastes and must be recycled. Used oil and antifreeze are regulated wastes that must be recycled or disposed of properly, never in the trash or a drain. Improper disposal carries penalties.

62. C — Original Equipment / Original Equipment Manufacturer. "OE/OEM" means Original Equipment / Original Equipment Manufacturer — parts made by or for the vehicle's manufacturer. This is a core catalog distinction from aftermarket.

63. D — A thermostat stuck open, allowing constant coolant flow. A thermostat stuck open allows constant coolant flow, so the engine runs cool and the heater is weak. A stuck-closed thermostat would cause overheating.

64. D — The catalytic converter in the exhaust. A timing belt service typically replaces the belt, tensioner, idler pulleys, and often the water pump, since they share the labor. The catalytic converter is unrelated to the timing system.

65. C — It maintains pressure, raising the coolant's boiling point. The radiator cap maintains system pressure, which raises the coolant's boiling point and protects against boil-over. It does not sense temperature or filter coolant.

66. C — The front crankshaft seal. A leak around a rotating shaft at the front of the engine involves the front crankshaft seal. Gaskets, by contrast, seal stationary joints.

67. A — 25 percent, profit relative to cost. Markup = profit ÷ cost =  $\$30 \div \$120 = 25\%$ . Markup is always figured on the cost.

68. D — It recirculates exhaust gas to lower combustion temperatures. The EGR valve recirculates a portion of exhaust gas into the intake to reduce combustion temperatures and NOx emissions. The PCV valve and oxygen sensor have different roles.

69. D — A scan tool is typically needed to retract the caliper pistons. On an electronic parking brake vehicle, rear brake service typically requires a scan tool to retract the pistons. This makes the job differ from a cable system.

70. C — A manufacturer may offer several shades with different codes. A single color name can cover several shades with different paint codes, so the name alone is insufficient. Only the code guarantees a match.

71. A — The driver's-side door jamb certification label. The actual build date the catalog needs for a date-split part is found on the door-jamb certification label. The model year and receipt do not give the true production date.

72. C — The part is supplied as a complete assembly. "ASSY" indicates the part is supplied as a complete assembled unit. The other abbreviations indicate each, not available, and standard.

73. B — DOT 5 is silicone and DOT 5.1 is glycol-based; they are incompatible. Despite the similar numbers, DOT 5 is silicone-based while DOT 5.1 is glycol-based, and they are incompatible. The exact specification must be matched.

74. C —  $\$96.00$ , the cost divided by 0.75. Pricing to a 25% margin divides cost by  $(1 - 0.25)$ :  $\$72 \div 0.75 = \$96$ . Margin is figured on the selling price.

75. A — An interchange list. An interchange list cross-references a part number across different brands and to OE. The other resources do not perform cross-referencing.

76. C — A failed electric cooling fan. Overheating at idle and slow traffic but not at highway speed points to a failed cooling fan, since airflow at speed compensates. At low speed the fan must pull air through the radiator.

77. D — It produces a squeal warning the pad is worn. A brake pad wear indicator produces a squeal that warns the customer the pad is worn. It does not change friction, disable brakes, or improve heat resistance.

78. D — TTY bolts stretch once and lose proper clamping when reused. Torque-to-yield head bolts stretch when first torqued and lose proper clamping force when reused, leading to a head gasket leak. New bolts should be used.

79. A — A failed belt can let pistons strike open valves, causing damage. On an interference engine, a broken timing belt lets the pistons strike open valves, causing severe damage. This is why timely replacement is critical.

80. A — \$200.00, the discounted price with no tax. A 20% discount gives  $\$250 \times 0.80 = \$200$ , and the tax-exempt account adds no tax. Correctly identifying the exempt account prevents wrongly charging tax.

81. D — The engine runs too cool and warms slowly. A thermostat stuck open allows constant coolant flow, so the engine runs too cool and warms slowly. A stuck-closed thermostat would cause overheating.

82. A — A worn or scored flywheel prevents proper clutch engagement. Leaving a worn or scored flywheel during a clutch job prevents proper engagement, causing slipping. The flywheel should be inspected and resurfaced or replaced.

83. B — It assists pedal effort, usually via engine vacuum. The brake booster assists pedal effort, usually via engine vacuum. The master cylinder generates pressure, and the ABS and parking brake serve other roles.

84. A — Extend lines, subtotal, apply discount, then add tax. The correct invoice order is to extend each line, subtotal, apply the discount, then add tax. Applying tax before the discount produces an incorrect total.

85. C — \$60.00, the cost plus the 25 percent markup. Pricing to a markup multiplies cost by 1.25:  $\$48 \times 1.25 = \$60$ . Markup is figured on cost.