

PRACTICE EXAM 24: AUTOMOTIVE SERVICE TECHNICIAN (125 QUESTIONS)

Allow four hours. Select one answer, A, B, C or D, for each question. Use the data and assumptions supplied. Complete the paper before reading its answer key. At least 88 correct answers meet a 70% practice threshold; these independent questions are not official examination items.

1. A supplied cable model carries 25 A with an allowed 0.5 V loss. What maximum resistance follows from those values?

- A. 0.005 ohm
- B. 0.02 ohm
- C. 12.5 ohms
- D. 0.2 ohm

2. A traction cooling repair specifies fluid compatibility and air removal. What should completion use?

- A. Use the approved filling and response checks.
- B. Accept only a full reservoir-level mark.
- C. Select fluid from its apparent colour alone.
- D. Fill further without checking the air-removal result.

3. An evaporative system's designated storage element principally retains which material for its intended later handling?

- A. Crankcase oil mist in its separating arrangement.
- B. Exhaust gas in its recirculation passage.
- C. Liquid fuel at injection-rail operating pressure.
- D. Fuel vapour within the specified evaporative arrangement.

4. A grinding repair is planned near a restraint device. What should preparation establish?
- A. Only the panel's accessible spark path.
 - B. The specified protection and work boundary.
 - C. Only the grinder's electrical inspection.
 - D. Only a reduced grinding duration near the device.
5. A supplied clearance model uses 72.08 mm measured bore and 72.02 mm piston diameter. What diametral difference should be compared with its criterion?
- A. 0.03 mm
 - B. 0.12 mm
 - C. 0.06 mm
 - D. 0.02 mm
6. A starter repair removes a ground connection for access. What should completion include?
- A. Only the starter's unloaded sound.
 - B. Only the ground fastener's presence.
 - C. Use a nearby ground without a loaded check.
 - D. Restore and verify the required ground path.
7. A torque-reversal clunk follows repair. The supplied inspection finds one retaining fastener below its required installed condition, while joint and spline checks pass. What is strongest?
- A. The deficient attachment relationship.
 - B. Every joint defective independently.
 - C. A spline fault despite its passing result.
 - D. Normal attachment because the fastener is present.

8. A motor receives no current and shows the supplied full voltage across its terminals. Its load winding is open, while the external connector checks pass. What is strongest?

- A. A missing terminal voltage.
- B. The internal open load path.
- C. Normal motor condition because its connector passes.
- D. A mechanically stalled energized motor drawing high current.

9. An electrical terminal repair requires the specified conductor size and seal. What should assembly use?

- A. A smaller conductor because it is easier to crimp.
- B. Only a matching cavity shape.
- C. The complete approved terminal, wire and protection arrangement.
- D. Only an unloaded continuity pass.

10. A transfer-case actuator's command passes, but actual range feedback stays unchanged. The supplied manual mechanism check passes and the actuator load is electrically open. What is strongest?

- A. Normal selection because the switch was moved.
- B. The open actuator load path.
- C. A missing command already excluded.
- D. A seized transfer mechanism despite its passing check.

11. A charging-path repair opens a protected fuse-link assembly. What should completion restore?

- A. The specified protective parts, connections and checks.
- B. Only the source voltage.
- C. A larger link selected without the circuit requirement.
- D. Only an unprotected jumper.

12. A steering repair requires replacing an incompatible sensor bracket. What should final installation establish?

- A. Only code clearing.
- B. Only a level-looking position.
- C. An arbitrary shim used without the mounting criteria.
- D. The approved mechanical reference and required setup.

13. A caliper inspection requires checking several specified bore locations. What should the technician measure?

- A. Only the easiest opening.
- B. Only one repeated dimension.
- C. Each prescribed location using the required method.
- D. The smallest observed point regardless of the instructions.

14. A road-speed vibration changes significantly when a verified wheel assembly replaces one damaged rim. Engine-speed-at-rest testing remains quiet. What is supported?

- A. The removed wheel assembly contributed to the complaint.
- B. A mandatory steering module replacement.
- C. An engine-rpm-only fault conclusively.
- D. Normal original rim because it held pressure.

15. A gas-charged support strut is disconnected during panel repair. Which stored-energy condition must its handling procedure account for?

- A. Only the panel's electrical switch state.
- B. The strut's retained pressure and mechanical force.
- C. A removed fastener proving the strut has no energy.
- D. Only the vehicle's fuel level.

16. A constant-velocity joint supports which intended driveline relationship in its approved use?

- A. Adjustment of hydraulic brake pressure.
- B. Permanent disconnection whenever steering changes.
- C. Automatic selection of engine fuel mixture.
- D. Torque transfer through its designed articulation relationship.

17. A diesel actuator repair disturbs its mechanical adjustment. What should final setup establish?

- A. Only the connector latch.
- B. Only motor power.
- C. The required reference, movement range and verification.
- D. An arbitrary position that clears the warning.

18. A suspension noise occurs at one attachment during the supplied loaded test. Fastener clamp fails its requirement, while bushing movement and joint play pass. What is strongest?

- A. Every joint failing independently.
- B. Normal retention because the bolt has not fallen out.
- C. A bushing defect despite its passing check.
- D. The unacceptable attachment condition.

19. A battery discharge occurs only with the repaired audio branch active after its supplied sleep period. Disconnecting that branch restores the permitted draw without changing other awake states. What is strongest?

- A. A normal parked state proved by sound output.
- B. An unwanted load within the audio branch.
- C. An identical fault at every unrelated branch.
- D. A starting-motor fault during the sleep test.

20. One ignition branch has zero current under a valid command. The supplied coil resistance test is open and its feed and ground pass. What is strongest?

- A. A missing command already excluded.
- B. A mechanically stalled high-current load.
- C. An open coil load path.
- D. Normal ignition output from a present connector.

21. A transmission cooler's designed circuit principally addresses which operating requirement?

- A. Transfer the designated fluid's heat under its approved arrangement.
- B. Change the gear tooth-count ratio.
- C. Repair every friction element automatically.
- D. Set the clutch pedal's mechanical position.

22. A programmed module replacement requires final communication checks across assigned domains. What should verification cover?

- A. A matching case number as complete evidence.
- B. The actual required paths and related functions.
- C. Only one local scan response.
- D. Only the file loading successfully.

23. A module loses communication when a joint in its positive supply is loaded. Network waveforms and ground pass, but the joint's voltage loss exceeds limit and repairing it restores response. What is supported?

- A. The local loaded feed connection contributed.
- B. Normal original feed from an unloaded reading.
- C. A failed shared bus despite its passing waveform.
- D. A ground defect already not supported.

24. A supplied brake-repair stock plan needs 1.85 m and 2.20 m lengths with 0.10 m total allowance. What stock length is calculated?

- A. 3.95 m
- B. 4.25 m
- C. 4.15 m
- D. 4.05 m

25. A supplied rotor test gives readings of 24.14, 24.10 and 24.12 mm. What maximum-to-minimum range should be compared with its variation criterion?

- A. 0.12 mm
- B. 0.02 mm
- C. 0.14 mm
- D. 0.04 mm

26. A camera replacement has a vehicle-specific calibration requirement. What should final repair verify?

- A. A successful calibration from another vehicle.
- B. Verify mounting and the prescribed calibration.
- C. Only a visible image.
- D. Only connector fit.

27. A steering complaint appears after changing wheel offset. The installed wheel fails the supplied compatibility check; tire pressure and steering joint tests pass. What is strongest?

- A. Normal fit because the wheel bolts on.
- B. A failed joint despite its passing test.
- C. A pressure deficiency already excluded.
- D. The unapproved wheel geometry and its effects.

28. An EV connector seal is replaced near an exposed high-voltage interface. What should restoration establish?

- A. Verify only the connector's mechanical latch.
- B. Verify only the controller's normal display.
- C. Restore the specified insulated, sealed interface.
- D. Reuse the seal after an exterior inspection.

29. A transmission's pressure report is abnormal. An independent approved gauge is normal, and the configured sensor type differs from the actual replacement's supplied definition. What is strongest?

- A. The report's sensor-selection or interpretation mismatch.
- B. A real pressure failure confirmed by both readings.
- C. A mandatory hydraulic overhaul.
- D. Normal complete setup because the connector fits.

30. A repair discharges hot fluid through a temporary line whose destination is unverified. What should preparation provide?

- A. The line directed toward any open floor space.
- B. The approved receiving route and exposure controls.
- C. Only a smaller valve opening.
- D. Only extra gloves.

31. A driveline seal is installed with a specified protective guide over a sharp shaft feature. What should the technician use?

- A. The approved guide and complete seal-fitting process.
- B. Force the seal past the edge without protection.
- C. A damaged lip accepted if the outside seats.
- D. Only extra external lubricant.

32. A repair procedure calls for documenting the final module configuration. What should the record identify?

- A. Only the install date.
- B. Only the removed module's label.
- C. The actual authorized setup and relevant verification result.
- D. An assumed configuration based on appearance.

33. A repaired gasoline support hose needs clearance from engine movement. What should final routing restore?

- A. Only matching hose colour.
- B. An unsupported route accepted because it seals once.
- C. Only a tight stationary fit.
- D. The prescribed slack, support and protected envelope.

34. A timing repair specifies a tensioning sequence at a defined engine position. What should assembly use?

- A. Only the removed belt's tension by feel.
- B. The actual position, tensioning and final verification method.
- C. Extra tension applied to prevent all movement.
- D. Any convenient rotation position.

35. A brake hose repair specifies replacing its damaged retaining clip. What should completion restore?

- A. Only a tighter unrelated clamp.
- B. A loose hose accepted because it looks clear at rest.
- C. The actual clip, route and movement protection.
- D. Only the hose's initial sealing.

36. A diesel support valve's command and position feedback agree, but its prescribed flow test fails because its internal passage is obstructed. What is strongest?

- A. The valve's hydraulic or gas-flow restriction.
- B. A sensor battery as the passage obstruction.
- C. Normal flow established by feedback alone.
- D. A missing movement command.

37. A timing drive maintains which intended engine relationship?

- A. The throttle's commanded opening angle.
- B. The injector's electrical pulse interval.
- C. The crankshaft bearing's operating clearance.
- D. The required crankshaft-to-camshaft phase.

38. A parking brake applies but does not release fully. The supplied feedback confirms its command, while a damaged return mechanism fails the independent movement check. What is strongest?

- A. An absent release request already excluded.
- B. A tire-size mismatch as the return mechanism.
- C. Complete acceptance from the application pass.
- D. The defective mechanical release arrangement.

39. A common-clock comparison records 4.2 ms actual transit against a supplied 3.0 ms target. What excess should be compared with its allowed deviation?

- A. 1.2 ms
- B. 7.2 ms
- C. 4.2 ms
- D. 3.0 ms

40. An EV charge complaint requires distinguishing external supply from vehicle response. What should preparation use?

- A. Replace the pack from the warning alone.
- B. Check the specified supply and vehicle paths.
- C. Check only the external supply voltage.
- D. Check only the vehicle's charging inlet.

41. A module's local response passes but its expected output is missing. The supplied sequence requires a valid external input, which is absent through a confirmed open connection. What is strongest?

- A. A complete absence of module power.
- B. An output failure proven without satisfying its prerequisite.
- C. The missing prerequisite input path.
- D. Normal full sequence from local response alone.

42. An HVAC component repair requires a final control relearn. What should the technician establish?

- A. Only the display powering on.
- B. Only manual mechanism movement.
- C. A setting copied from a different controller.
- D. The defined reference conditions and relevant function checks.

43. A supplied traction test records 320 V and 125 A. What electrical input power should be compared with its requirement?

- A. 25.6 kW
- B. 40 kW
- C. 80 kW
- D. 4 kW

44. A network's valid static resistance reading establishes what limited kind of evidence?

- A. Complete normal live communication at all times.
- B. Accurate content of every transmitted message.
- C. The measured electrical path under that defined test state.
- D. Correct programming of every module automatically.

45. A transmission command is valid, but its actual ratio does not change. The supplied valve-response test fails at the commanded circuit while the relevant sensor readings pass. What is strongest?

- A. The failed hydraulic control-response path.
- B. A sensor-report fault already not supported.
- C. A tire wear pattern as the valve response.
- D. Normal completed shift from command alone.

46. A clutch repair replaces a seal that caused contamination. What should completion also address?

- A. The old contamination left if the seal is now dry.
- B. Only added bolt force.
- C. The affected friction and mating parts under their criteria.
- D. Only the new seal's fit.

47. A harness repair changes its route near a rotating pulley. What should installation establish?

- A. Only parked continuity.
- B. Only shorter wire length.
- C. The harness tensioned against the pulley guard.
- D. The required supported clearance through the operating envelope.

48. An HVAC drain repair requires an approved outlet location. What should final restoration verify?

- A. The outlet redirected into an interior cavity.
- B. The specified routing and actual controlled drainage.
- C. Only blower operation.
- D. Only a dry housing at rest.

49. A tool's measuring range ends at 50 mm, while the required component dimension is 62 mm. Its reference test within range passes. What is strongest?

- A. The tool is not suitable for the required dimension despite its reference pass.
- B. An estimated extension can replace the missing capability.
- C. The part must be defective because the tool cannot span it.
- D. The pass extends its rated range to any size.

50. A wheel bearing principally supplies which mechanical relationship?

- A. Command the wheel's ABS modulation.
- B. Support and permit rotation at its designed interface.
- C. Change the differential's tooth count.
- D. Set the tire's inflation pressure.

51. Regenerative operation uses the traction machine in its designed generating state. What is its principal energy relationship?

- A. Transfer charge between cells without wheel input.
- B. Convert supply energy into battery heat directly.
- C. Return motion energy electrically within system limits.
- D. Supply traction torque from stored electrical energy.

52. A fuel-support repair specifies a particular connector seal compatible with its service. What should assembly use?

- A. The approved seal, seating and verification method.
- B. Extra sealant as an unverified substitute.
- C. Only a tight-looking connection.
- D. Any soft seal of similar size.

53. An alignment reading is outside range. Ride height fails its specified loaded condition because an incorrect spring is installed; the locating components pass damage checks. What is strongest?

- A. Adjust another angle outside its range to hide the result.
- B. Assume undamaged components prove correct ride height.
- C. Use calibration alone to replace the wrong spring.
- D. Restore the prescribed spring and ride-height relationship before final alignment.

54. A clutch-engagement shudder follows contamination from a confirmed seal leak. Surface and repair criteria fail at the friction interface while mounting and wheel checks pass. What is strongest?

- A. A wheel fault despite its passing result.
- B. The affected clutch friction condition and leak source.
- C. A control-module label as the physical contamination source.
- D. Normal clutch surface from full engagement alone.

55. A camera diagnostic requires checking its mounting reference before calibration. What should preparation establish?

- A. Only a code-free scan.
- B. Only the image display lighting.
- C. The actual bracket, vehicle-state and target prerequisites.
- D. An arbitrary target placement for convenience.

56. A heater valve's actual position stays closed while command changes. Supply passes, the motor load is open, and the approved disconnected valve check moves freely. What is strongest?

- A. A missing controller request already excluded.
- B. Normal valve operation because supply exists.
- C. A mechanically seized valve despite its test.
- D. The actuator's open electrical load.

57. A diesel rail reading is low. The independent pressure test confirms it, the supplied pump-input condition fails at a restricted feed, and injector return checks pass. What is strongest?

- A. The deficient upstream fuel-feed condition.
- B. Only a display error despite independent agreement.
- C. Normal pump supply because the tank contains fuel.
- D. An injector return failure already excluded.

58. A wheel attachment requires clean mating faces before its fastening sequence. What should installation establish?

- A. Only a flush-looking wheel.
- B. Verify seating and the prescribed tightening.
- C. Only the final nut's torque.
- D. More torque applied over retained debris.

59. A specified cranking compression test principally evaluates which engine quantity?

- A. The pressure developed in the cylinder during that test.
- B. The intake manifold's operating vacuum.
- C. Warm-idle oil-gallery pressure.
- D. Steady leakage percentage under an applied leak-down source.

60. A source message is correct, but one recipient applies the wrong supplied unit conversion after a software change. The received payload matches at all recipients. What is strongest?

- A. A different message despite the capture.
- B. Normal report because the payload arrives.
- C. The affected recipient's interpretation configuration.
- D. A total communication absence.

61. A communications harness is repaired at a flexing door hinge. What should final installation restore?

- A. A tight straight route that prevents slack.
- B. Only tape appearance.
- C. Only closed-door continuity.
- D. The designated movement protection, support and path checks.

62. A supplied temperature comparison records 95 C at the component and 77 C at its designated reference point. What difference should be used in that stated comparison?

- A. 18 C
- B. 172 C
- C. 22 C
- D. 9 C

63. A gasoline engine's pressure report is low, but an approved independent gauge confirms its supplied range. The sensor's own curve passes; a configured conversion factor is wrong after replacement. What is strongest?

- A. An isolated sensor failure despite its curve pass.
- B. A real low pressure established by both tests.
- C. Normal report because the connector fits.
- D. The pressure-report interpretation or setup.

64. A driveline fastener repair requires checking threads before assembly. What should preparation verify?

- A. Higher torque used to overcome damaged threads.
- B. Only matching the visible hex.
- C. The prescribed thread condition and compatible hardware.
- D. Only that one turn is possible.

65. A repaired shaft support has a prescribed final alignment measurement. What should assembly verify?

- A. Only mounting-bolt torque.
- B. The actual installed support relationship.
- C. An approximate position chosen to reduce visible vibration.
- D. Only the previous location marks.

66. A relay operates its coil but its output drops under the supplied load. Contact loss exceeds limit; bypass through the approved comparison produces normal load operation. What is strongest?

- A. A failed load despite its comparison.
- B. Normal relay delivery because it clicks.
- C. The relay contact or its connection path.
- D. A missing coil request already excluded.

67. An engine repair replaces parts selected in matched groups by its instructions. What should installation preserve?

- A. Only the exterior finish.
- B. The required identification and matched relationships.
- C. Any same-sized part from the bin.
- D. A mix chosen for easier assembly.

68. A restraint warning follows interior work. The prescribed disabled check finds a pinched signal lead and an open path; other relevant circuits pass. Restoring that lead removes the condition on the required retest. What is supported?

- A. Every deployment device necessarily failed.
- B. Normal wiring because trim was refitted.
- C. A required replacement of all safety modules.
- D. The damaged local signal path contributed.

69. An engine compression report is low at every cylinder, but the specified cranking speed is not achieved and the battery-path test fails. A corrected supply restores speed and the required readings. What is supported?

- A. The inadequate test cranking condition affected the original results.
- B. A valve replacement as the only supported repair.
- C. Every cylinder was conclusively damaged.
- D. A normal initial test despite its failed speed prerequisite.

70. An A/C performance complaint occurs with both pressures in the supplied normal region. The measured duct outlet becomes warm where its seal admits heater-side air, while evaporator operation passes. What is strongest?

- A. An evaporator fault despite its passing result.
- B. Normal cabin output from normal pressure alone.
- C. The installed mixing or duct-sealing path.
- D. A confirmed missing refrigerant charge.

71. A gateway input includes the required message, but its output identifier differs from the supplied destination requirement after configuration. The destination bus and its recipients pass their electrical tests. What is strongest?

- A. The gateway's configured routing or identifier mapping.
- B. A missing input message already excluded.
- C. Normal forwarding because some output exists.
- D. Every destination bus wire physically open.

72. A diesel injection repair requires covering opened ports during an interrupted task. What should the work arrangement preserve?

- A. Only component identity.
- B. The specified internal protection and clean assembly condition.
- C. Only an exterior wipe afterward.
- D. Ports left open because the vehicle is indoors.

73. A restraint connector repair has a specified approved terminal disposition. What should the technician use?

- A. Retain the contact after exterior sealing.
- B. Use a generic connector's repair method.
- C. Use an unapproved terminal of similar size.
- D. Use the authorized repair and final checks.

74. A caliper's designated inside jaws are used correctly at a bore. Which dimension is that arrangement intended to measure?

- A. The part's electrical resistance.
- B. The tool's contact torque.
- C. The bore's oil-flow rate directly.
- D. The internal distance between the contacted surfaces.

75. An electric steering warning appears under assist demand. The torque request is valid and motor load passes, but the supply connection exceeds its loaded-loss limit. What is strongest?

- A. A missing torque request already excluded.
- B. The steering supply path under demand.
- C. Normal assist voltage from an unloaded pass.
- D. A failed motor load despite its test.

76. A supplied steady thermal-load model uses 1.6 kW for 30 minutes. What energy is represented?

- A. 0.8 kWh
- B. 0.4 kWh
- C. 3.2 kWh
- D. 1.6 kWh

77. A repaired brake requires a final warning and control check in addition to mechanical inspection. What should verification include?

- A. Only one static pedal feel.
- B. A clear stored-code list treated as proof of every function.
- C. The complete required functions at their defined states.
- D. Only the pad's visual thickness.

78. A washer pump passes its flow test, but fluid never reaches the outlet. Inspection finds the connecting hose detached and leakage at that point; the nozzle passage is clear. What is strongest?

- A. Normal delivery because the pump runs.
- B. A blocked nozzle despite its passing check.
- C. The interrupted delivery hose connection.
- D. A pump producing no flow.

79. A tire sensor replacement has a specific sealing hardware kit. What should assembly install?

- A. An arbitrary washer that stops leakage temporarily.
- B. The prescribed parts and required relearn checks.
- C. Only the old seal's appearance.
- D. Only a sensor matching the case shape.

80. Regenerative request is reduced with the battery at its supplied charge-acceptance limit. The documented strategy permits that reduction and the friction-brake checks pass. What is strongest?

- A. The reported limit explains the commanded regeneration change.
- B. Complete loss of braking despite the stated checks.
- C. An absent charge limit already excluded.
- D. A confirmed motor failure solely because regeneration falls.

81. A circuit's ground return provides which intended electrical relationship?

- A. The circuit's stored electrical charge.
- B. The circuit's switched supply connection.
- C. The circuit's regulated voltage control.
- D. The designated current-return path.

82. A hub's local wheel-speed signal passes, but its module input is absent. The supplied wiring test finds a separated terminal at the controller while sensor power passes. What is strongest?

- A. A sensor producing no local output.
- B. The interrupted delivery connection.
- C. Normal module input from a sensor-side pass.
- D. A worn friction pad as the electrical terminal fault.

83. A high-voltage repair's isolation check gives an unexpected result. What should the technician do?

- A. Repeat only the interlock-status reading.
- B. Substitute an accessible voltage test point.
- C. Treat completed wait time as proof of isolation.
- D. Maintain isolation and use the approved response.

84. A powered window regulator's principal mechanical role is to do what?

- A. Hold the glass's weather-sealing interface.
- B. Provide the door latch's retention engagement.
- C. Guide and move the glass through its designed travel.
- D. Provide the door hinge's pivot support.

85. A diesel fuel filter's intended function principally addresses what?

- A. Specified particulate contamination in its fuel path.
- B. The valve train's mechanical phase.
- C. The turbocharger's shaft speed directly.
- D. Every injector's electrical opening command.

86. The supplied test has 12 V across a 3-ohm load. What expected current should be compared with the operating measurement?

- A. 36 A
- B. 4 A
- C. 9 A
- D. 3 A

87. The HVAC blower principally provides which system function?

- A. Move air through its designated housing and duct path.
- B. Meter liquid refrigerant at the evaporator.
- C. Compress refrigerant into the high side.
- D. Regulate engine fuel pressure.

88. A brake releases hydraulically within its supplied limit, but its guide mechanism fails movement and the wheel remains dragged. The rotor mounting check passes. What is strongest?

- A. Normal wheel release because the pedal returns.
- B. A rotor-mounting failure already excluded.
- C. The mechanical release path.
- D. Retained pressure despite its passing result.

89. A brake-pressure report is high, but an approved gauge confirms the supplied normal condition. The sensor signal at the module matches the physical test, while its configured scaling fails. What is strongest?

- A. Normal scaling from signal presence alone.
- B. A real pressure excess confirmed independently.
- C. An open signal path despite the captured input.
- D. The controller's pressure interpretation setup.

90. A lubrication component repair requires a specified contamination check. What should preparation establish?

- A. Only the component's new packaging.
- B. An operating run used to clear retained debris.
- C. Only an exterior wipe.
- D. The required internal cleanliness and affected-path condition.

91. A mirror reaches its physical stop, but the supplied position report is wrong. Its sensor response passes, while the configured mechanical reference differs from the required post-replacement setup. What is strongest?

- A. The mirror's reference or initialization relationship.
- B. A motor that never reaches the stop.
- C. A sensor-element failure despite its supplied pass.
- D. Normal reporting because physical travel completes.

92. A transmission repair calls for an updated fluid specification. What should service use?

- A. A fluid selected by apparent viscosity alone.
- B. The approved fluid and filling method.
- C. A higher-viscosity substitute without authorization.
- D. Only the old fill quantity.

93. A shaft vibration appears after a support bracket is moved. The supplied alignment check fails there; shaft balance and joint movement pass. What is strongest?

- A. Normal support because its bolts are tight.
- B. A binding joint already not supported.
- C. The support's changed alignment relationship.
- D. An out-of-balance shaft despite its passed check.

94. A charging report differs from an independent battery-post test. The supplied report's reference circuit fails, while the actual output remains within range under load. What is strongest?

- A. A real output failure confirmed by both observations.
- B. A required generator overhaul from the display alone.
- C. The reporting reference or interpretation path.
- D. Normal report because the source operates.

95. A supplied ratio model predicts 1,000 output turns, while the actual count is 940. What percentage shortfall relative to prediction follows?

- A. 6%
- B. 9.4%
- C. 12%
- D. 10%

96. An alignment procedure requires settling the vehicle at its defined load. What should measurement use?

- A. Only a previous printout.
- B. That actual load and suspension state.
- C. An arbitrary cargo change to make an angle pass.
- D. Only the first hanging-suspension reading.

97. A window repair releases the glass from its mechanism. What should the technician provide?

- A. Only motor shutdown.
- B. A coworker catching the glass after it drops.
- C. An unsupported panel held by the loose fastener.
- D. The approved glass support and controlled installation method.

98. A caliper installation requires correct side and connection orientation. What should assembly verify?

- A. Only a hose that reaches.
- B. The prescribed component, hydraulic arrangement and final checks.
- C. A reversed installation accepted if no immediate leak appears.
- D. Only fitting bolt holes.

99. A supplied flow test collects 420 mL in 12 seconds. What rate should be compared with the stated L/min requirement?

- A. 1.05 L/min
- B. 0.42 L/min
- C. 4.2 L/min
- D. 2.1 L/min

100. A sensor connector is replaced after water damage. What should final restoration verify?

- A. Restore the specified contact and seal.
- B. Only the connector's exterior dryness.
- C. Only clearing its recorded fault code.
- D. Accept the old seal after one normal response.

101. A lamp feed measures correctly with the lamp unplugged. Connected, voltage falls below range across a high-loss joint while the source and ground pass. What is strongest?

- A. Normal feed from the unplugged reading.
- B. An open lamp load carrying no current.
- C. The feed connection's loaded resistance.
- D. A failed battery source despite its passing test.

102. A suspension repair exposes a damaged control-arm bushing. What should disposition follow?

- A. Accept the bushing from static alignment alone.
- B. The actual component's replacement or permitted repair criteria.
- C. Adjust another geometry setting before assessing it.
- D. Assess only the arm's metal for deformation.

103. A gasoline engine's exhaust sensor reports a specified exhaust condition. How should that signal be interpreted?

- A. Using its actual sensor definition and operating test conditions.
- B. As a replacement for all wiring checks.
- C. As complete proof of one failed component in every case.
- D. Using a different exhaust sensor's scaling unchanged.

104. A network repair specifies checking a connector's terminal tension. What should the technician use?

- A. An oversized probe used to increase the grip.
- B. Only housing-latch closure.
- C. The approved contact assessment and repair criteria.
- D. Only wire colour.

105. A supplied tire model has diameter 700 mm. Using $\pi = 3.14$, what ideal circumference should be compared with its rotational calculation?

- A. 4,396 mm
- B. 1,099 mm
- C. 700 mm
- D. 2,198 mm

106. A hybrid no-ready diagnostic requires a complete relevant scan before directed testing. What should the technician preserve?

- A. A diagnosis copied from a similar-looking vehicle.
- B. Only a code clear.
- C. The actual codes, mode and prerequisite data.
- D. Only the first displayed description.

107. A rear-camera display passes its approved internal image test, but receives no camera output. Camera supply and ground pass; the supplied source-output test fails at the camera while the cable passes. What is strongest?

- A. A missing camera power condition already excluded.
- B. The camera's output function.
- C. A cable open despite its passing check.
- D. A failed display despite its comparison.

108. A test input makes 84 rotations while the stated output makes 24. What reduction ratio should be compared with the range specification?

- A. 3.5:1
- B. 4.5:1
- C. 2.5:1
- D. 1.75:1

109. A supplied ideal mixture combines one unit at 15 C with three at 55 C, all with equal heat capacity. What temperature follows without other transfer?

- A. 50 C
- B. 40 C
- C. 35 C
- D. 45 C

110. A throttle repair requires checking movement after the prescribed initialization. What should verification include?

- A. Only code clearing.
- B. Only a manual plate movement.
- C. A successful donor-vehicle test.
- D. The prescribed setup and response checks.

111. A washer-hose repair needs routing away from a moving hinge. What should installation restore?

- A. The line stretched tight across the hinge.
- B. The designated sealing, support and movement clearance.
- C. Only nozzle spray once.
- D. Only a shorter hose.

112. A supplied disconnected network has correct conductor assignment but its terminating path is open after a module removal. The required topology comparison fails. What is strongest?

- A. A guaranteed source-data scaling error.
- B. An added parallel load lowering resistance.
- C. The missing termination path in the changed arrangement.
- D. A normal installed topology because wire order passes.

113. Cabin airflow is low although the blower meets its supplied speed. The upstream filter passes, but a pressure comparison localizes restriction after the blower and inspection finds a collapsed duct. What is strongest?

- A. The downstream air-path restriction.
- B. A filter obstruction despite its passing result.
- C. A missing blower command.
- D. Normal delivery from blower speed alone.

114. A supplied inspection finds coolant in one combustion chamber and a crack at its surrounding casting passage. The gasket's specified inspection passes. What is strongest?

- A. Normal chamber condition because the engine started.
- B. A failed gasket conclusively despite its passing evidence.
- C. An oil-filter restriction as the coolant entry path.
- D. The cracked casting's internal fluid boundary.

115. A network disturbance is confined to a branch with crushed insulation. Its conductor is shorted to the supplied reference path; disconnecting the branch restores the live range. What is strongest?

- A. A mechanical tire-size issue explaining the measured short.
- B. A normal conductor path because its wire is still present.
- C. The damaged branch's unintended electrical connection.
- D. A source-input fault affecting all nodes independently.

116. An axle bearing-noise test fails under the supplied load condition. Its installation preload is outside specification after repair; gear contact and lubricant identification pass. What is strongest?

- A. Normal repair because the unit can rotate.
- B. The bearing's incorrect installed setting.
- C. A failed gear pattern despite its passing result.
- D. Wrong fluid already excluded.

117. A bearing repair requires supporting a particular race during press work. What should setup provide?

- A. The approved reaction path for the actual operation.
- B. A fully seated appearance as proof of an undamaged installation.
- C. Only greater press force.
- D. Any convenient outer contact.

118. A repair disturbs a driveline sensor's bracket and wiring. What should final restoration verify?

- A. A code clear used to waive the physical checks.
- B. The required mounting, routing and signal checks.
- C. Only connector fit.
- D. Only shaft movement.

119. A test instrument requires confirming its function before and after a particular check. What should verification include?

- A. Only the last stored value.
- B. A function assumption based on yesterday's calibration.
- C. Only a powered display before measurement.
- D. Both prescribed proving steps and the actual test.

120. A refrigerant-seal repair specifies preparation before tightening. What should assembly use?

- A. The actual seal, compatible preparation and fastening method.
- B. An unverified lubricant chosen for easier work.
- C. Only a higher final torque.
- D. Only external joint appearance.

121. An opened refrigeration circuit has a required cleanliness and evacuation stage. What should completion follow?

- A. Only a clean exterior line.
- B. The old charge quantity added without the required preparation.
- C. The prescribed internal restoration before charging and operation.
- D. Only a shorter operating run.

122. A common feed carries 7.5 A, while one verified branch carries 2.0 A. The supplied model has only two active branches. What current belongs to the other?

- A. 5.5 A
- B. 3.75 A
- C. 2.0 A
- D. 9.5 A

123. A vehicle is raised with a battery charging lead still crossing its movement route. What should happen before further movement?

- A. Continue if the lead appears long enough.
- B. Treat a powered charger display as clearance evidence.
- C. Restore the approved lead and vehicle-movement arrangement.
- D. Pull the lead tighter to remove slack.

124. A wheel-speed diagnostic requires identifying active or passive sensor design. What should preparation use?

- A. Only connector colour.
- B. A universal resistance test for every design.
- C. An arbitrary direct supply to find its response.
- D. The actual wiring and specified test method for that sensor.

125. An idle mixture complaint disappears when a damaged intake gasket is replaced. The supplied leak test had identified that exact path, and fuel pressure remains unchanged within range. What is supported?

- A. A mandatory replacement of every injector.
- B. The verified intake leak contributed to the complaint.
- C. A common pressure change as the demonstrated cause.
- D. Normal original gasket because the engine could idle.

Practice Exam 24: Answer Key and Explanations

1. **B** — Divide the supplied half-volt allowance by twenty-five amperes to obtain 0.02 ohm. This is the resistance corresponding to that particular model and load. It does not assert a universal vehicle limit, and actual repair acceptance still follows the applicable connections, measuring conditions and service requirements.
2. **A** — The thermal circuit needs its defined fluid and restored circulation state, not merely a visible level. Follow the actual filling and air-removal method and verify response. Appearance and arbitrary extra quantity cannot establish compatibility or prove that the repaired path is free of the condition the procedure addresses.
3. **D** — The storage element handles fuel vapour in the designated evaporative system. Injection-rail liquid supply, crankcase separation and exhaust recirculation have different purposes. Use the actual architecture and service requirements when interpreting purge or vent operation; the storage element alone cannot establish that every connecting line, valve or pressure-measurement path performs normally.
4. **B** — The surrounding restraint component is part of the task's hazard assessment, not just the repaired panel. Use the actual protection and safe-work instructions before applying sparks, heat or vibration nearby. Tool rating and shorter duration cannot independently establish a suitable work boundary for the affected device.
5. **C** — Subtract the piston diameter from the measured bore to obtain 0.06 mm diametral difference. Half that would describe a different radial quantity. The values are for the supplied comparison model; actual engine acceptance must use its specified locations, temperature and part-matching method rather than an assumed universal clearance.
6. **D** — The return joint needs its intended contact and secure location after the access work. Verify it under the relevant load. Sound and fastener presence cannot measure its loss, and a convenient unverified surface is not automatically a suitable substitute for the vehicle's required grounding arrangement.
7. **A** — The attachment fails its own condition in the path subjected to reversing torque while competing movement checks pass. Restore it under the fastening procedure and verify the complaint. Mere fastener presence cannot establish the required joint load or retention relationship after the repair.
8. **B** — The open winding agrees with full voltage and no current through the motor. A stalled energized load would be a different current condition. Sound external contacts cannot restore an internal interruption, so follow the motor's repair disposition rather than extending a connector pass to every part of the load.

- 9. C** — Physical cavity fit does not establish the conductor and environmental requirements. Restore the specified materials and method, then verify relevant operation. A low-current continuity result cannot approve an underspecified conductor or demonstrate the final connection's load performance and sealing condition.
- 10. B** — The mechanism can move under its approved check, but the powered actuator cannot carry current through its confirmed open load. Restore and verify that electrical path. Driver switch movement and command reception do not prove the selected range is physically achieved.
- 11. A** — The final path needs its actual protection and secure assembly as well as electrical continuity. A source reading does not prove that state. Use the designated link rather than substituting a larger rating or bypass, which changes the system's intended protective relationship instead of restoring it.
- 12. D** — The sensor needs its specified physical reference before control setup can be accepted. Correct and verify the bracket under the procedure. Appearance and software status cannot establish geometry, and an unapproved shim does not supply the required evidence for a replacement mounting relationship.
- 13. C** — The locations can reveal different dimensions or geometry across the inspected bore. Complete the actual measuring pattern before acceptance. Repetition at one accessible point cannot substitute for an omitted location, and a selected favourable reading does not establish the complete condition described by the inspection requirement.
- 14. A** — The controlled substitution changes the road-related symptom while the stationary comparison weakens an engine-speed-only source. Verify the final assembly and relevant operating range. Pressure retention cannot certify rim geometry, and improvement does not establish that every other vibration path has been independently assessed.
- 15. B** — The strut can retain pressure and force independently of the panel's electrical state. Follow its specified support, removal and handling requirements. Removing an attachment does not discharge stored energy, and another vehicle condition cannot establish that the strut is safe to dismantle or handle without its approved method.
- 16. D** — The joint transmits torque through the articulation required by its arrangement. Fuel mixture and braking controls are separate functions. Its installed geometry and condition still need the vehicle's criteria, so the general role does not authorize any shaft angle or prove lubrication and mechanical clearance are acceptable.
- 17. C** — The repaired actuator must meet its mechanical and control relationship, not merely receive power. Follow the prescribed reference and range checks. A latch and a cleared warning do not establish actual travel, while an arbitrary offset can conceal rather than correct an adjustment outside the approved condition.
- 18. D** — The localized sound agrees with a failed fastening condition while competing movement checks pass. Restore the joint under its assembly method. Bolt presence is not evidence of sufficient clamp or correct retention, and a component not visibly detached can still fail its operating attachment requirement.

- 19. B** — The controlled branch comparison removes the excess under the same supplied sleep state, localizing the demand to that path. Audio function does not establish correct parked behaviour. Continue isolating the branch's device and connections rather than concluding every accessory or the starter shares the fault.
- 20. C** — The coil's open result agrees with no operating current while command and supplies are available. Inspect and repair that load path under the ignition procedure. Connector presence cannot establish internal continuity, and the current evidence differs from a short or heavily loaded powered component.
- 21. A** — The cooler handles heat through its specified fluid path rather than changing mechanical gearing or repairing worn interfaces. Flow and installation still need the actual acceptance checks. A cooler being present cannot certify circulation through a kinked or incorrectly connected line under the relevant operating condition.
- 22. B** — Programming and local response do not establish every assigned path or function. Complete the checks prescribed for the installed vehicle. A successful file load shows one stage occurred, while the actual network relationships still need verification before the replacement is accepted as fully configured.
- 23. A** — The positive-path failure aligns with the complaint and changes after its controlled repair while other prerequisites pass. Restore and verify the actual operating path. An unloaded source value cannot certify current delivery, and a module's silence is not automatically evidence of a defective communication bus.
- 24. C** — Add the two required lengths to obtain 4.05 m, then include the supplied total 0.10 m allowance for 4.15 m stock. The allowance is not applied separately to each piece. This calculation supports material planning only; the actual approved tubing and repair method still govern the brake boundary.
- 25. D** — Use the largest 24.14 mm and smallest 24.10 mm readings to obtain 0.04 mm variation. The middle value does not change that range. Compare it with the separate supplied variation criterion rather than substituting average thickness or a minimum-service-thickness limit that addresses another requirement.
- 26. B** — The camera's installed geometry and actual setup must meet the procedure before its result is accepted. Image availability proves one function, not every alignment reference. A different vehicle's test cannot establish the condition of this repair, so complete the actual required method and records.
- 27. D** — The compatibility test identifies a changed physical relationship while the competing checks pass. Resolve the actual approved wheel arrangement. Bolt attachment cannot establish correct offset or clearance, and passing pressure and joints do not authorize a wheel whose geometry differs from the vehicle's stated requirement.
- 28. C** — The connector must regain its actual protective and mechanical state before the system is restored. A latch and software indication cannot certify every barrier or seal. Use the vehicle's specified

component and assembly process rather than applying an unapproved material as a substitute for the required interface.

29. A — The independent pressure and configuration comparison distinguish a reporting problem from a verified physical pressure failure. Resolve the actual sensor definition and setup under the procedure. Connector fit cannot establish signal compatibility, and an incorrect report alone does not authorize major mechanical work without the supporting physical tests.

30. B — The receiving arrangement determines where the hot fluid can expose workers and surfaces. Establish it before release. Gloves and slower flow can support a broader method but cannot supply a suitable destination, while open floor space is not itself proof of controlled handling or disposal.

31. A — The installation method protects the sealing interface as it passes the feature. Follow it and inspect the actual result. Outside seating cannot establish an undamaged lip, and unverified material or force does not replace the protective relationship required by the component procedure.

32. C — The record should describe what is actually installed and verified, not merely when assembly occurred. A removed component's identification may aid history but cannot establish the replacement's current setup. Preserve the authorized data and functional checks so later diagnosis does not rely on an unverified visual assumption.

33. D — The hose must maintain its suitable path as the engine moves, with the intended retention and protection. A stationary seal does not establish that envelope. Appearance and initial fit cannot replace the required movement check or authorize unsupported contact near components that change position during operation.

34. B — The position and sequence define how the actual drive is set before operation. Follow them and verify the resulting timing relationship. An old belt's feel cannot establish the new assembly, and additional force does not replace the specified condition or automatically improve its operating suitability.

35. C — The hose needs its prescribed retention throughout the operating envelope as well as a sound fluid boundary. Restore the clip and route, then verify movement clearance. A rest view cannot establish later strain or contact, and another clamp is not automatically a compatible substitute for the required support.

36. A — Position and flow are distinct functions. The mechanism can reach its reported state while an obstructed passage prevents the required delivery. Resolve that restriction under the component procedure rather than using correct feedback as complete acceptance evidence for everything passing through the installed valve.

37. D — The drive establishes the engine's defined mechanical phase relationship between crankshaft and camshaft. Injector timing commands, throttle position and bearing clearance are separate engine relationships. Correct component identity alone does not establish installed timing, so alignment and relevant verification must follow the actual engine procedure.

- 38. D** — The release request exists, but the physical return function fails its own check. Restore that mechanism and verify both states. A working application cannot certify release, so the system must not be accepted from only the favourable half of its intended operating cycle.
- 39. A** — Subtract the three-millisecond target from the 4.2 ms observed transit to obtain 1.2 ms excess. The values share the stated clock basis. This difference is not the total transit and does not independently identify a failing device without the actual path and timing diagnostics.
- 40. B** — The defined charging test separates equipment, connection and vehicle conditions before component selection. Follow both sides' relevant checks. A warning can describe a detected state without establishing its physical cause, and vehicle category alone cannot identify which power or communication path is failing.
- 41. C** — The output sequence is conditional on the failed external input, even though the module can perform its local response. Restore and verify that path before treating an intentionally unissued output as a defective load stage. One operating function cannot certify every prerequisite of another control sequence.
- 42. D** — The relearn needs the actual installed reference state and its verification. A powered screen and free manual movement establish limited observations, not the complete control setup. Another controller's setting may describe different equipment, so use the vehicle procedure rather than treating any configured value as correct.
- 43. B** — Multiply the stated 320 V by 125 A to obtain forty thousand watts, or forty kilowatts. The calculation concerns the supplied electrical input under one defined condition. It does not represent mechanical output without conversion information or authorize traction measurement outside the actual safe diagnostic procedure.
- 44. C** — The resistance result describes the specified electrical measurement, not every live message or setup function. Use it with the actual operating checks. A passing static value cannot independently certify content, delivery or configuration that the network procedure evaluates through different evidence and conditions.
- 45. A** — The requested state is not achieved and the matching control test fails while shaft reporting passes. Investigate that valve or circuit path. A command is evidence of intent, not mechanical completion, so it cannot establish the ratio changed when both measurement and response evidence show otherwise.
- 46. C** — The leak repair does not independently restore friction surfaces already exposed. Assess and replace or service affected parts as prescribed, then verify the complete interface. A dry new seal establishes one boundary; it cannot prove the previously contaminated assembly now meets its required operating condition.
- 47. D** — The route must preserve protection during actual movement, not just pass a static circuit check. Restore the specified supports and clearance. A short or tight path can transfer strain or contact to another point, so length alone does not establish a suitable installed wiring arrangement.

- 48. B** — The drain needs a suitable destination and flow path, not only temporary absence of water. Restore the approved route and verify it under the relevant check. Blower activity does not establish condensate handling, and an interior discharge can relocate the leak instead of providing its required disposal path.
- 49. A** — A reference pass demonstrates a condition within the tool's stated capability, not a larger usable range. Select a suitable verified method for the sixty-two-millimetre requirement. A tool limitation is not evidence of a defective part, and estimation cannot replace the prescribed measurement for acceptance.
- 50. B** — The bearing supports the intended rotating interface under its selected arrangement. Electronic modulation and pressure sensing are other system functions. Rotation alone does not prove acceptable bearing condition, so the actual load, movement and inspection requirements must be used when assessing its service suitability.
- 51. C** — Regeneration returns vehicle motion energy through the designed generating and control arrangement, subject to the vehicle's limits and operating state. Motoring consumes stored energy, while direct heating and cell balancing have other purposes. The generating function alone cannot establish the available energy acceptance or a safe service boundary without the relevant operating checks.
- 52. A** — The wetted interface needs the correct material and installed condition, not only physical fit. Use the actual replacement and check requirements. Softness and exterior tightness cannot identify compatibility, while an arbitrary additional product changes the prescribed assembly rather than demonstrating its acceptance.
- 53. D** — The spring selection prevents the vehicle reaching the required measurement state, which can affect the geometry being assessed. Restore that prerequisite before accepting final alignment. Undamaged parts and software cannot replace the actual load-support relationship defined by the component and ride-height requirements.
- 54. B** — The leak creates an identified unacceptable friction condition under the relevant engagement complaint, while competing checks pass. Restore both the source and affected interface under the procedure. Later full engagement does not establish smooth or suitable behaviour during the transition where the fault is reproduced.
- 55. C** — The calibration's meaning depends on the specified physical setup. Establish the actual references before accepting a result. A clear code list and working display cannot prove bracket or target geometry, so convenience must not replace the measurement conditions prescribed for the installed camera system.
- 56. D** — The valve can move mechanically, but the actuator cannot carry current through its confirmed open load despite command and supply. Repair and verify that drive path. Present voltage does not establish actual motion, and a passing manual comparison helps separate electrical operation from a seized fluid-control component.
- 57. A** — The pressure issue is physically confirmed and the upstream feed fails its requirement while return checks pass. Investigate and restore that supply path before condemning reporting alone. Fuel

being present in the tank cannot establish flow through a restricted connection under the actual demand condition.

58. B — The wheel must seat as specified before its attachment is loaded through the full sequence. A flush appearance cannot establish the interface beneath it. Extra torque does not correct trapped material, and one fastener's reading cannot provide evidence that the complete wheel joint was assembled correctly.

59. A — Compression, leak-down, oil pressure and manifold vacuum are different diagnostic measurements. The cranking test records the cylinder pressure developed under its defined conditions. Use its actual preparation and criterion rather than substituting another test's quantity or assuming one observation certifies every engine sealing and timing condition.

60. C — The shared payload is delivered correctly, while the recipient's conversion fails its specified definition. Resolve that setup rather than treating receipt as proof of accurate reported units. A valid transport path can carry information that one module interprets incorrectly after a configuration change.

61. D — The hinge area changes its geometry during operation, so restore the actual route and verify the relevant movement states. Closed-door continuity cannot certify full travel. Removing required slack can create strain at another point, and exterior covering alone does not establish the prescribed supported path.

62. A — Subtract the seventy-seven-degree reference from the ninety-five-degree component value to obtain an eighteen-degree difference. The readings belong to the supplied matched comparison. Adding them does not represent the temperature rise, and acceptance still depends on the actual test's condition and criterion rather than the difference alone.

63. D — The independent physical measurement passes while the sensor response and failed conversion comparison focus investigation on interpretation. Resolve the actual setup before replacing delivery components. A reported number can disagree with reality even when the sensor is mechanically installed and individually responds as specified.

64. C — The joint needs acceptable mating threads as well as suitable fastener identity. A starting turn does not establish full engagement or condition. Extra force can conceal or worsen damage rather than meet the required assembly criteria, so resolve the actual thread relationship before tightening.

65. B — The measurement verifies geometry after the support is secured, independently of bolt loading or old marks. Use the actual procedure and criterion. An approximate position can change the symptom without establishing the intended relationship, so visible improvement is not a substitute for the prescribed installed check.

66. C — The load works through the permitted comparison while the normal switched path fails its loss criterion. Investigate the contact and associated connections. Clicking describes coil or mechanism activity, not successful current delivery, so it cannot override a failed loaded measurement at the switch path.

- 67. B** — The matching requirement belongs to the actual component relationship and must remain traceable through repair. Similar size or finish cannot authorize interchangeability. Preserve identification and follow the specified grouping rather than treating apparent physical fit as proof that an arbitrary combination meets its installed requirements.
- 68. D** — The failure is localized to damaged wiring and changes after its approved restoration while competing checks pass. Follow the full restraint verification without extending the code to every device. Reinstalled trim does not prove the hidden harness is correctly routed or electrically intact.
- 69. A** — The controlled correction restores the required test condition and changes the cylinder results, supporting a measurement-condition contribution. Do not condemn every cylinder from readings collected outside the supplied procedure. The comparison should still be followed by the complete valid compression test rather than accepting the supply repair as every engine check.
- 70. C** — The refrigeration observations pass, but the delivered air changes through a confirmed warm-air path. Investigate the installed air mixing and sealing arrangement. Normal pressures cannot certify cabin temperature, because air-side routing can alter the result after the evaporator performs its intended cooling function.
- 71. A** — The gateway produces traffic, but not the identifier required by the destination definition. Resolve that configured relationship under the actual vehicle method. Electrical bus passes cannot correct an assigned output mismatch, and any traffic is not automatically proof that the intended message was forwarded correctly.
- 72. B** — The specified covers protect the internal boundary while it is exposed. Restore them and the clean handling method during the interruption. Indoor location does not establish that debris cannot enter, and exterior appearance or correct part identification cannot verify the condition inside an unprotected port.
- 73. D** — The terminal's condition must be restored using the vehicle's authorized restraint method. Exterior treatment and a warning extinguished by bypass cannot certify the actual circuit. Use the designated component and safety sequence rather than altering the interface through an unapproved probing or substitute connection.
- 74. D** — The inside jaws measure the dimension across their contacted internal surfaces within the tool's method. They do not directly determine fluid flow or electrical properties. Reference checks and proper alignment remain necessary, so physical contact alone does not establish an accurate bore measurement at every location.
- 75. B** — The request and load checks pass while the current-carrying path fails at the relevant demand condition. Restore and verify that connection before assigning a different component fault. An unloaded reading cannot establish acceptable motor supply, and correct command does not compensate for excessive loss along its feed.
- 76. A** — Convert thirty minutes to half an hour and multiply by the 1.6 kW input to obtain 0.8 kWh. This accumulates the supplied model's power over time. It does not certify a real component's

performance or authorize high-voltage testing outside the actual vehicle's approved method and work boundary.

77. C — The checks address different parts of the repaired system. Complete the required physical and control verification under the actual method. A clear record cannot certify every live response, and a pad dimension does not establish sensor, application or release behaviour at the prescribed operating state.

78. C — The pump generates flow, but the detached connection diverts it before the clear nozzle. Restore the actual route and verify spray under the procedure. Pump sound or output at one point cannot establish delivery beyond a separately open boundary in the accessory's fluid path.

79. B — The replacement must restore the designed mechanical seal and control identification. Similar shape and temporary leak stoppage do not establish compatibility. Use the specified kit and setup, then verify the relevant system behaviour rather than accepting an unverified adapted interface.

80. A — The command matches the supplied acceptance-limit strategy while the friction checks pass. Interpret the operating state before assigning a traction-machine defect. The reduced request does not alone demonstrate failed regeneration hardware, but any additional complaint still needs the actual brake and control diagnostic method.

81. D — The return path completes the circuit's intended current relationship under its design. It does not regulate every supply or repair a defective component. Ground integrity requires the actual loaded check where specified; visual connection alone cannot establish that the path has acceptable operating resistance.

82. B — The expected signal exists at the hub but cannot reach its recipient through the identified separation. Restore and verify that connection. Local sensor function and power do not certify delivery, and a mechanical pad condition does not explain the measured interruption in the information path.

83. D — The required safe condition is not established by the unexpected test. Keep the work boundary controlled and use the vehicle procedure with qualified personnel. A different unapproved point or bypass cannot provide the prescribed evidence for access and may change the state rather than resolve its cause.

84. C — The regulator moves and guides the glass according to its installation and control arrangement. Glass weather sealing, latch engagement and hinge pivoting serve different body functions. Correct motor activity alone cannot establish its movement condition, so the actual glass support, guides and required travel checks matter to diagnosis and repair.

85. A — The filter screens particulate contamination according to its selection and installed path. Electrical injector timing and mechanical phase use different components. A filter's role does not prove it remains unrestricted or suitable, so diagnosis must assess its actual condition under the engine's required delivery test.

86. B — Divide the stated twelve volts by three ohms to obtain four amperes under the supplied model. The value is an expected comparison, not a component-health verdict without actual operating data.

Multiplying voltage and resistance would not give the current required by the stated electrical relationship.

87. A — The blower moves air through the selected HVAC arrangement. Refrigerant pressure and metering are separate cycle functions. Rotation alone cannot certify cabin delivery if ducts or seals are obstructed or misassembled, so the actual airflow path and operating checks remain relevant to diagnosis.

88. C — The wheel drag accompanies a failed mechanical movement test while hydraulic release and mounting pass. Assess that guide arrangement under the brake method. Pedal return cannot establish every local component's free motion, and the supplied tests separate a mechanical restriction from a pressure-retention explanation.

89. D — The physical pressure and received signal pass, but the recipient applies an incorrect definition. Resolve that interpretation rather than diagnosing a hydraulic excess from the report alone. A signal arriving correctly does not prove the controller converts it into the required engineering value.

90. D — The repaired lubrication path needs its stated clean condition before operation. External wiping and new packaging do not describe all connected passages. Use the approved inspection and cleaning scope rather than sending retained material onward through operation, which does not supply the required acceptance evidence.

91. A — Physical travel and position interpretation are separate checks. The sensor responds correctly, but the installed reference does not match its required definition. Restore and verify the setup before condemning a working motor or sensor solely because the reported position disagrees with the observation.

92. B — The actual unit's instructions define both fluid suitability and final fill condition. Appearance and old quantity do not establish compatibility. An arbitrary viscosity change is not a repair method, so use the specified product and complete the required level and operating verification.

93. C — The moved bracket fails its relevant installation criterion while the rotating-component checks pass. Restore the approved support geometry before broader replacement. Tight bolts establish one attachment observation but cannot prove the bracket places the shaft in the intended operating relationship.

94. C — The physical output passes while the report uses a failed reference, separating the indication problem from an established generating fault. Restore that measurement path under the charging procedure. Normal source operation does not make the report accurate, and its displayed value alone cannot authorize mechanical overhaul without supporting tests.

95. A — The difference is sixty turns. Divide by the one-thousand-turn prediction and multiply by one hundred to obtain six percent. This expresses the stated model comparison rather than identifying its cause. Validate the counters and relevant driveline checks before interpreting the shortfall as a specific torque-transfer defect.

96. B — The load and settled state establish the geometry to which the specification applies. Use them before accepting the readings. A previous or hanging-state value describes a different condition, while changing cargo solely to produce a favourable angle cannot demonstrate compliance under the stated measurement method.

97. D — The released glass needs the support defined by its removal and installation method. Stopping the motor does not restrain gravity movement at an opened attachment. Establish suitable support before release rather than relying on catching the panel or an unsecured connection to hold it.

98. B — Mechanical fit and an initial absence of leakage do not establish the intended side-specific arrangement. Verify the actual component and connection method, then complete the required hydraulic and release checks. A reachable hose can still be routed or connected differently from the approved installation.

99. D — The supplied collection is thirty-five millilitres per second. Multiply by sixty and convert to litres to obtain 2.1 L/min. Both measurements must describe the actual defined test interval. Fuel handling remains governed by the approved procedure; this arithmetic does not authorize an uncontrolled open-flow collection method.

100. A — The repair must restore electrical contact and environmental protection under the actual procedure. Exterior dryness does not establish the condition inside the interface, and one response cannot approve a missing seal. Complete the specified path checks before accepting the repaired measurement.

101. C — The connected load exposes excessive loss at the joint even though the unloaded point appeared normal. Restore and verify that current path. An unplugged voltage check cannot demonstrate delivery under demand, and the passing source and ground results focus the investigation on the supplied feed connection.

102. B — The damaged bushing needs its prescribed assessment independently of the original access task. Static geometry and an intact metal arm cannot establish the bushing's locating function under load. Follow the permitted repair scope and verify the actual movement before using another adjustment to address a change in wheel geometry.

103. A — The signal represents the quantity and response defined for that sensor, not an automatic repair verdict. Circuit and operating conditions still matter. Interpret the actual data through the vehicle procedure rather than turning one value into proof of every fuel or electrical condition in the engine-support system.

104. C — The terminal's own contact condition requires its prescribed method, independently of the housing's latch. Use an approved repair or replacement if it fails. Wire colour does not establish mechanical engagement, and a larger probe can damage the interface rather than restore the defined contact relationship.

105. D — Multiply the stated seven-hundred-millimetre diameter by 3.14 to obtain 2,198 mm ideal circumference. The given value is diameter, so another factor of two is not added. This compares the

supplied circle model, not an independently measured loaded rolling circumference for every actual tire condition.

106. C — The complete specified scan and operating context help select the actual diagnostic path. One description does not establish every prerequisite, and clearing information cannot restore a missing input. Use the current vehicle's evidence rather than assuming a visually similar configuration has the same readiness fault.

107. B — The display can show the required test image and the delivery cable passes, while the powered camera fails its specific output check. Assess that source under the actual accessory procedure. A blank display during normal use does not by itself identify the display as the defective part.

108. A — Divide eighty-four input rotations by twenty-four output rotations to obtain 3.5 to one. The supplied range comparison uses those actual shafts. It does not include additional gearing beyond the tested boundary, so adding an axle ratio would answer a different question from this measured relationship.

109. D — Weight each temperature by its supplied flow: fifteen plus three times fifty-five, divided by four, gives forty-five degrees Celsius. The larger warm flow shifts the result above the midpoint. This is the stated ideal model, not an automatic prediction for every real HVAC heat-transfer condition.

110. D — The component's manual motion and its installed control response are different evidence. Complete the specified setup and tests on the actual vehicle. Clearing a message cannot establish correct references, and another unit's result cannot certify how this controller operates the repaired throttle arrangement.

111. B — The hose must remain connected and protected through the hinge's operating range. One spray pass cannot establish the route under movement, and reduced length can create strain. Restore the specified support and clearance instead of using a tight path as a substitute for the intended installation.

112. C — The conductor assignment and topology checks describe different requirements. Restore the specified termination relationship after the removal. Correct pin order does not prove the remaining arrangement includes every required path, and an open termination is not explained by an added lower-resistance parallel load.

113. A — The supplied comparison places the restriction downstream of a correctly operating blower and passed filter, with matching physical evidence. Restore and verify that route. Blower speed is one measurement and cannot establish that air reaches the cabin through an obstructed outlet arrangement.

114. D — The observed fluid and identified passage crack support an internal boundary fault in the casting. The supplied gasket result narrows that alternative. Engine startup does not establish acceptable sealing, and a different lubrication restriction cannot explain the direct coolant path identified at the chamber.

115. C — The identified physical damage and short agree with the controlled recovery after disconnection. Localize and restore that branch under the approved wiring method. Wire presence

cannot prove insulation, and the test evidence does not support an unrelated mechanical mismatch as the cause of the electrical range failure.

116. B — The failed bearing setting agrees with the load-related result while other checks pass. Restore and verify that assembly condition using the actual method. Rotation cannot quantify its intended load relationship, and a gear-pattern pass does not waive an independent bearing requirement.

117. A — The race-specific support defines how the installation force reaches the bearing without the unintended path the procedure avoids. Provide it before pressing. Greater force and final seating cannot independently prove that the method preserved the component's required internal condition.

118. B — The sensor needs its prescribed mounting and protected circuit as well as a connection. Restore and verify both under the actual method. Shaft rotation and cleared messages do not establish reference geometry, and an unverified bracket can leave the signal wrong even when the connector fits.

119. D — The proving steps establish that the instrument performs as required around the actual measurement. A working display or earlier record does not independently show it remained functional during this test. Complete both steps rather than extending a past pass to a new measurement condition without verification.

120. A — The joint needs its prescribed sealing interface before load is applied. Complete the preparation and required tightening, then verify the boundary. Extra force and appearance cannot establish material compatibility, while an arbitrary lubricant changes the assembly condition instead of meeting the specified service method.

121. C — The circuit must regain its specified internal condition before normal service. Exterior cleanliness cannot demonstrate the state of its opened passages. Complete the actual preparation and checks rather than using runtime or an unverified previous charge to stand in for the required restoration procedure.

122. A — Subtract the measured two-ampere branch from the 7.5 A common feed to obtain 5.5 A for the other path. The two-branch model is explicitly supplied. Additional unlisted loads would change the inference, so use the defined boundary rather than assigning the total feed value to each branch individually.

123. C — The lead route must suit the planned vehicle movement and the charging equipment's requirements. Resolve it before changing the vehicle's position. Apparent length and a functioning display cannot establish that movement avoids strain, contact or disruption at the actual connection points.

124. D — The sensor type determines how its signal and electrical prerequisites are assessed. Use the actual definition rather than transferring a test from another design. Connector appearance cannot establish that method, and unapproved direct powering does not provide the prescribed diagnostic evidence for the installed circuit.

125. B — The failed leak test and controlled repair agree while the stated fuel-pressure condition remains valid. This supports the identified air-entry contribution without assigning a defect to all injectors. Ability to idle does not prove an intake boundary is sealed under the actual test requirements.