

PRACTICE EXAM 17: 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 charging complaint appears with high cable loss. Source output meets its criterion, but a repair splice dissipates excessive voltage under load. What should be localized?
 - A. Changing battery identity as conductor repair.
 - B. A new belt as electrical splice restoration.
 - C. The measured splice and downstream delivery path.
 - D. Generator replacement despite satisfactory source output.

2. Correcting engine timing restores compression, but a required related interference inspection remains incomplete after the documented misassembly. What should release require?
 - A. Complete the applicable damage and operation checks.
 - B. Acceptance from the improved readings alone.
 - C. Extra oil as proof that no contact occurred.
 - D. An unrelated sensor replacement as inspection.

3. An incompatible axle assembly is replaced with the approved ratio. What should completion verify?
 - A. Only a clear warning display.
 - B. Only the ratio printed on its package.
 - C. Complete application, fluid, connections and relevant driveline operation.
 - D. Leaving verification to the first customer trip.

4. A tire-pressure warning is incorrect despite verified actual pressure and accurate sensor values. The installed control threshold differs from the supplied vehicle configuration. What should be corrected?

- A. Changing real pressure to suit the wrong setting.
- B. The approved threshold configuration and monitoring response.
- C. A wheel-balance adjustment as threshold setup.
- D. Replacing every accurate sensor.

5. A jammed throttle assembly is replaced. What should completion include?

- A. Unapproved stop adjustment to remove a warning.
- B. Only a fully open bench position.
- C. Only clearing throttle history.
- D. Required setup, physical response and operating checks.

6. A gasoline fuel trim concern appears after an airflow-sensor seal is omitted. The prescribed leakage test identifies the gap in its intended measured-air route. What should be addressed?

- A. Immediate sensor replacement from trim alone.
- B. Increasing idle speed to avoid checking the gap.
- C. Injector coding as seal restoration.
- D. The verified air-path installation and related measurement.

7. Cabin airflow is adequate but heating is poor. Actual coolant entering the heater circuit is below its supplied requirement because engine warm-up fails the prescribed test. What should diagnosis address?

- A. An unrelated sensor identity reset.
- B. The verified heat-supply condition and engine cooling function.
- C. Replacing the passed blower first.
- D. A larger cabin filter as heat production.

8. A loose coolant-pump impeller is replaced with the specified assembly. What should completion verify?

- A. Correct drive, containment and restored circulation.
- B. Only that the shaft can be turned by hand.
- C. A higher fan setting without checking flow.
- D. Only replacement fit without circulation verification.

9. A circuit diagnosis requires comparing source and load voltage under the same condition. Why should readings be simultaneous or condition-matched?

- A. A large display automatically corrects timing differences.
- B. Any two historical readings always describe one state.
- C. Changes in load or control state can distort the comparison.
- D. Voltage at rest proves maximum-load delivery.

10. Why must network data interpretation use the applicable units and scale?

- A. Any displayed number always uses a universal scale.
- B. A valid checksum proves every sensor value is true.
- C. Wire colour alone determines every parameter's units.
- D. Correctly received numbers can represent different physical quantities.

11. An HV connector is fully latched, but its specified voltage-verification equipment fails the required pre-use check. What is appropriate?

- A. Resolve equipment validity before the approved work-point test.
- B. Open the enclosure to verify by inspection.
- C. Accept latch state as proof of safe voltage.
- D. Average uncertain readings to infer absence.

12. What does a suitably configured torque wrench apply in a controlled fastening task?

- A. The fastener's material hardness directly.
- B. The specified rotational moment under its prescribed method.
- C. The gasket's chemical compatibility directly.
- D. A universal clamp load independent of friction.

13. A charging complaint occurs only when one cooling valve fails its commanded position. Its supplied mechanical check confirms binding, while the charger performs normally with the required thermal path restored. What should be assessed?

- A. Every battery cell is necessarily damaged.
- B. Disabling cooling checks to keep charging active.
- C. The valve and sustained thermal-circuit operation.
- D. The charger must be replaced despite verified recovery.

14. An engine airflow test supplies 14.4 g/s air and 1.2 g/s fuel under its simplified model. What air-to-fuel mass ratio is calculated?

- A. 12:1.
- B. 15.6:1.
- C. 0.0833:1.
- D. 13.2:1.

15. A specified dimensional reference is 80.00 mm and an instrument indicates 79.92 mm. What indication error relative to the reference results?

- A. 0.8 mm low.
- B. 0.08 mm low.
- C. 159.92 mm high.
- D. 0.08 mm high.

16. A suspension vibration begins after support replacement. The part is applicable, but its installed orientation differs from the supplied datum and it contacts the body during prescribed travel. What must be assessed?

- A. A tire rotation as orientation correction.
- B. More damping force as body-clearance repair.
- C. The support installation and required movement clearance.
- D. Acceptance from correct part identity alone.

17. A body sensor diagnosis uses a substituted input approved by the vehicle procedure. What does a valid response help assess?

- A. Automatic proof that the original sensor is faulty.
- B. The structural strength of the sensor bracket.
- C. Every physical condition throughout the vehicle.
- D. The receiving path's reaction to that defined test signal.

18. What does brake fluid do within its intended hydraulic actuation circuit?

- A. Replace all required mechanical actuation clearance.
- B. Provide mechanical retention for every brake pad.
- C. Transmit pressure through the specified liquid path.
- D. Regulate actuation pressure independently of applied force.

19. A service test requires a gauge connection protected from heat by a specified arrangement. What should setup use?

- A. Only a higher gauge scale as heat protection.
- B. A hand-held gauge beside the moving belt.
- C. An unverified hose touching the exhaust.
- D. The approved connection and temperature protection.

20. A tire-pressure threshold is restored to its approved value. What should verification include?

- A. Correct actual pressures, sensor associations and warning response.
- B. Only the new parameter label.
- C. Changing every tire to match an unverified setting.
- D. Only clearing the warning once.

21. What does an accessory actuator's feedback generally indicate?

- A. A guarantee that all attached mechanisms remain intact.
- B. The position or state assigned to its sensing arrangement.
- C. The current through every vehicle load.
- D. The exact remaining life of its motor.

22. A brake-pressure sensor replacement passes its local test, but installed data still conflicts with the reference because the required input configuration is wrong. What remains?

- A. Restore the applicable configuration and verify full measurement response.
- B. Acceptance from the component test alone.
- C. A permanent offset selected to remove the warning.
- D. Master-cylinder replacement without pressure evidence.

23. A park mechanism is repaired, but the supplied final holding test still fails. Range indication is normal. What should be done?

- A. Raise idle speed as holding repair.
- B. Release from the displayed state alone.
- C. Delete the failed test entry.
- D. Continue the mechanical diagnosis and required safe verification.

24. An engine overheats under load. The prescribed inspection finds its belt-driven coolant-pump impeller loose on the shaft, while the drive belt and thermostat checks pass. What should be assessed?

- A. An ignition update as impeller retention.
- B. A thermostat replacement despite its passed check.
- C. The pump's internal motion transfer and circulation.
- D. More coolant above the specified fill level.

25. A biased EV motor-temperature sensor is replaced. What should verification include?

- A. Only a cleared propulsion message.
- B. Valid temperature information and normal or protective strategy response.
- C. Only motor rotation with a simulated input.
- D. A permanent disabled temperature limit.

26. A powered door mirror changes angle normally, but its reported position remains fixed. Mechanical movement is confirmed, and the prescribed test identifies a failed feedback path. What is supported?

- A. A new switch must be required despite delivered command.
- B. Assess the position feedback independently of the moving drive.
- C. Increasing fuse rating as sensing repair.
- D. The motor is necessarily seized.

27. An air-suspension height value changes without actual body movement. Independent height measurement is stable, and the prescribed connector test identifies an intermittent signal short. What should be localized?

- A. The height-sensing circuit and required input response.
- B. More air pressure as signal repair.
- C. A real sudden suspension movement is proved.
- D. A new compressor solely from the changing display.

28. A high-loss splice is repaired and loaded readings pass. Its required strain support is absent, leaving the joint pulled during normal movement. What must be completed?

- A. An enlarged fuse without restoring the joint support.
- B. Acceptance from the stationary electrical result.
- C. Restore support and verify movement-sensitive operation.
- D. Additional programming without the physical support repair.

29. A repaired engine requires a specified pre-start lubrication step. What should the technician do?

- A. Assume a filled reservoir proves every oil path ready.
- B. Disable indication to avoid a false concern.
- C. Start first and wait for the warning to clear.
- D. Complete that step and verify required readiness.

30. An input changes when a harness is moved, and its independent physical condition remains steady. The prescribed test locates an intermittent signal short rather than a sensor failure. What should be repaired?

- A. Every shared supply despite passed tests.
- B. A new battery to change harness routing.
- C. The sensor solely because its display changes.
- D. The identified signal fault and mechanical protection.

31. A supplied compression comparison records maximum 210 kPa and minimum 168 kPa. What is the minimum as a percentage of maximum?

- A. 8%.
- B. 80%.
- C. 125%.
- D. 42%.

32. A diesel crank signal is electrically valid, but its pulse pattern differs from the supplied reference after target replacement. The installed target identifier is incorrect. What should be verified?

- A. Correct target application and synchronization relationship.
- B. Sensor replacement solely because pulses differ.
- C. Injector replacement before restoring the reference.
- D. Higher cranking voltage as tooth-pattern repair.

33. What distinguishes approved variant coding from arbitrary parameter changes?

- A. It physically repairs all damaged terminals.
- B. It makes every hardware variant interchangeable.
- C. It applies the required configuration to the actual supported vehicle.
- D. It permits any convenient setting that removes a warning.

34. A gasoline canister replacement requires specified routing of vapour connections. What should installation verify?

- A. Only matching the ports' outer diameters.
- B. Only that the engine starts.
- C. Correct identities, secure connections and required flow behaviour.
- D. Interchanging hoses to simplify access.

35. A communication event occurs only with a particular diagnostic adapter. The verified approved adapter restores access, and the suspect adapter fails its own prescribed connection check. What should be resolved?

- A. A stronger vehicle battery as connector repair.
- B. Vehicle gateway replacement from the first attempt.
- C. All modules updated to match the failed adapter.
- D. The suspect tool connection before assigning a vehicle fault.

36. A diagnostic capture records 1.8 million bits over 0.6 seconds under a supplied counting model. What average recorded bit rate results?

- A. 3 million bit/s.
- B. 18 million bit/s.
- C. 0.333 million bit/s.
- D. 1.08 million bit/s.

37. A stated engine part is 300 mm long and expands with coefficient 0.000012 per °C over a 50°C rise. Using $\text{expansion} = \text{length} \times \text{coefficient} \times \text{rise}$, what increase results?

- A. 1.8 mm.
- B. 0.18 mm.
- C. 0.018 mm.
- D. 18 mm.

38. An engine cranks unusually fast with uniformly low compression after timing work. Independent checks confirm adequate cranking voltage, and the mechanical timing reference fails. What is supported?

- A. Replace the starter because cranking is fast.
- B. Condemn all injectors from compression alone.
- C. Increase fuel pressure to restore mechanical timing.
- D. Resolve the verified timing discrepancy and associated checks.

39. A harsh shift coincides with a required engine-torque reduction not occurring. The transmission request reaches the engine module, but its incompatible configuration rejects that function. What should be assessed?

- A. Higher fluid level as message compatibility.
- B. Correct inter-system configuration and the required torque response.
- C. Immediate internal overhaul from harshness alone.
- D. A new range sensor despite correct request data.

40. A diesel pressure-control request is valid, but a verified actuator supply is absent because its repaired feed is misconnected. The component itself passes its check. What should be corrected?

- A. The identified feed mapping and actual actuation path.
- B. A larger fuel pump as electrical mapping.
- C. The passed actuator replaced immediately.
- D. An unrelated temperature-sensor offset.

41. A gearbox whine is localized by the approved test to an output-bearing location. Inspection confirms pitting there while the gear-contact checks meet their criteria. What is supported?

- A. Clutch-pedal adjustment as surface-pitting repair.
- B. Every gearset is proved faulty despite its passed checks.
- C. The identified bearing and associated support condition need assessment.
- D. A larger battery as bearing support.

42. A diesel crank target is replaced with the verified application. What should completion assess?

- A. An arbitrary sensor shim to force a signal.
- B. Only an erased correlation code.
- C. Only that the target can be fastened.
- D. Specified installation and valid synchronized signal behaviour.

43. A body seam seal is repaired after localized leakage. What should completion test?

- A. Only the seal's external appearance.
- B. Covering the wet trim before checking the seam.
- C. The original controlled exposure and verified interior dryness.
- D. Only an unrelated dry area.

44. A stated tire pressure is 30 psi. With supplied conversion $1 \text{ psi} = 6.895 \text{ kPa}$, what equivalent pressure results?

- A. 2,068.5 kPa.
- B. 206.85 kPa.
- C. 4.351 kPa.
- D. 36.895 kPa.

45. A supplied reduction is 3.5:1 with input speed 2,800 rpm. What ideal output speed results?

- A. 800 rpm.
- B. 980 rpm.
- C. 9,800 rpm.
- D. 2,796.5 rpm.

46. A bead leak repair restores air retention, but wheel mounting damage remains outside its supplied acceptance criterion. What must be done?

- A. Tighten beyond specification to close the defect.
- B. Resolve structural suitability before return to service.
- C. Add balance weight over the damage.
- D. Release from sealing success alone.

47. A node's communication loss follows a supply reset. Captured timestamps show the supply interruption begins before the missing-message event while the common bus stays normal. What should diagnosis prioritize?

- A. A software update without checking the recorded power fault.
- B. A whole-bus defect despite its preserved signal.
- C. Every recipient independently failed first.
- D. The initiating supply interruption and reset path.

48. A hot cooling system must be opened for inspection. What should preparation establish?

- A. The specified cooled and depressurized service condition.
- B. A loose cap before temperature is assessed.
- C. Only that the radiator fan has stopped.
- D. Only that the dashboard warning is absent.

49. A supplied diesel test compares pressure 720 kPa with target 800 kPa. What percentage of target is achieved?

- A. 80%.
- B. 111.1%.
- C. 90%.
- D. 10%.

50. A gasoline engine's throttle command changes but the plate remains physically fixed. Its motor supply passes and the prescribed inspection finds a jammed shaft. What should be localized?

- A. More fuel pressure to free the shaft.
- B. The mechanical throttle movement and affected assembly.
- C. Pedal replacement despite a valid command.
- D. A larger fuse as an accepted jam repair.

51. An SRS circuit remains faulty after an approved component replacement. The supplied wiring test localizes an open terminal in the original harness, while the new component passes. What should be assessed?

- A. A larger restraint fuse to bridge the open.
- B. A fixed simulation left for ordinary driving.
- C. Replacement of the passed component again.
- D. The identified harness connection under the restraint procedure.

52. A restraint harness terminal is repaired by its approved method. What should final verification follow?

- A. Permanent simulation instead of the repaired component.
- B. Only connector appearance.
- C. The specified circuit and complete restraint-system checks.
- D. Only a cleared warning indicator.

53. An AWD bind begins after axle replacement. Tires match their requirement, but the documented axle ratio differs from the front unit despite a supplied requirement for matching ratios. What is supported?

- A. Verify and restore the approved axle-ratio combination.
- B. Replace the matched tires before checking the axle.
- C. Changing only the mode-display setting.
- D. A larger coupling fuse as ratio correction.

54. A supplied gear pair has 64 driven teeth and 16 driving teeth. What reduction ratio is calculated?

- A. 4:1.
- B. 80:1.
- C. 0.25:1.
- D. 48:1.

55. A release bearing is replaced after verified roughness. What should related checks include?

- A. Only one engine-off gear selection.
- B. Increasing release travel beyond the procedure.
- C. Specified guide, support, actuation and final clutch function.
- D. Only the new bearing's exterior appearance.

56. A diesel actuator feed is corrected after misconnection. What should verification include?

- A. Only an unloaded continuity tone.
- B. A permanent direct feed without the normal strategy.
- C. Only the terminal's outer shape.
- D. Correct mapping, loaded delivery and pressure-control response.

57. A supplied battery-energy model has 60 kWh usable capacity and a 15-percentage-point state decrease. What energy corresponds to that decrease under the simple proportional model?

- A. 4 kWh.
- B. 9 kWh.
- C. 45 kWh.
- D. 900 kWh.

58. A locating flange replacement meets runout, but its required fastening hardware was reused contrary to the supplied replacement instruction. What remains?

- A. Resolve hardware conformity and reverify the completed installation.
- B. Acceptance from one geometry result.
- C. Higher tightening force without procedure review.
- D. Repeat the geometric reading without resolving hardware.

59. A supplied wheel-end spacer target is 4.6 mm and an approved existing part contributes 3.2 mm. What added thickness is calculated?

- A. 0.14 mm.
- B. 1.4 mm.
- C. 7.8 mm.
- D. 1.4375 mm.

60. A tire loses air at the bead seat. The approved leak check localizes bubbles there, and inspection finds the seating surface outside its supplied condition while the valve passes. What should be assessed?

- A. Valve replacement despite its passed test.
- B. Higher inflation beyond specification as surface repair.
- C. Sensor relearn as physical bead sealing.
- D. The bead interface and applicable wheel or tire disposition.

61. What does an HVAC expansion device control in its specified refrigeration arrangement?

- A. The blower's motor current directly.
- B. Engine-coolant pressure at the cap directly.
- C. The designed refrigerant metering into the low-pressure path.
- D. Every air door's mechanical position.

62. A hatch lamp stays on despite a closed latch. The receiving input responds normally to substitution, and the original switch is physically stuck in its open-state indication. What should be localized?

- A. Lamp replacement as the false-command repair.
- B. A larger battery to alter latch state.
- C. The receiving module despite correct test response.
- D. The latch sensing component and local connection.

63. A refrigerant service cylinder's identity is uncertain. What should the technician do?

- A. Use pressure alone as complete identification.
- B. Verify its contents and approved service use before connection.
- C. Mix its contents with known refrigerant for dilution.
- D. Connect it if the fitting can be made to fit.

64. A park-holding diagnosis includes a controlled mechanical check under the vehicle procedure. What should preparation provide?

- A. Only an unattended incline test.
- B. Permission inferred from low engine speed.
- C. The specified restraint and safe test conditions.
- D. Only the displayed park symbol.

65. A body accessory installation requires checking bracket clearance through its specified movement. What should completion verify?

- A. The full approved envelope and secure mounting.
- B. Only the replacement's package dimensions.
- C. Only clearance in one convenient position.
- D. Removing a travel stop to avoid interference.

66. What does a transmission range input describe in its assigned control role?

- A. The sensed selector or range state used by the strategy.
- B. The measured fuel quantity in the engine.
- C. Guaranteed physical torque transfer in every gear.
- D. The exact wear of each internal bearing.

67. A connection loses 0.16 V at 25 A. Using $\text{power} = \text{voltage loss} \times \text{current}$, what dissipation results?

- A. 0.0064 W.
- B. 4 W.
- C. 156.25 W.
- D. 25.16 W.

68. A steering mount visibly moves under the specified load test. Inspection confirms its supporting housing is cracked outside the supplied acceptance criterion. What is supported?

- A. Acceptance because the assist motor operates.
- B. Calibration used to hide physical movement.
- C. Disposition the damaged structural support and verify the steering arrangement.
- D. Extra torque as universal crack repair.

69. A scope trace changes only after its reference lead loses contact. The signal returns to the approved pattern when that reference is securely restored. What is supported?

- A. The waveform proves every sensor is damaged.
- B. The expected signal specification should be widened.
- C. The vehicle module necessarily failed during capture.
- D. The faulty measurement reference affected the apparent signal.

70. A supplied service sequence requires a 12-minute interval before its next verification step. Seven minutes have elapsed. What additional interval remains?

- A. 5 minutes.
- B. 19 minutes.
- C. 84 minutes.
- D. 1.714 minutes.

71. A brake-fluid service records 0.42 L and 0.18 L collected. What total quantity results?

- A. 6 L.
- B. 0.0756 L.
- C. 0.24 L.
- D. 0.60 L.

72. A gateway mapping repair restores the displayed value, but its required downstream output still does not respond. What remains?

- A. Acceptance from data display alone.
- B. Verify and diagnose the complete affected function.
- C. Changing the value until an output happens accidentally.
- D. Another sensor replacement without source evidence.

73. What does an engine thermostat regulate in its intended cooling arrangement?

- A. Set every component at one temperature without regulation.
- B. Fuel-filter particle capacity directly.
- C. Coolant flow according to its designed temperature response.
- D. Transfer heat without any change in its flow relationship.

74. Several nodes on one splice segment are absent. Their separate feeds pass, and a prescribed test locates an open at the common data splice. What should be restored?

- A. Every powered node replaced independently.
- B. Battery registration as splice repair.
- C. A larger fuse on each branch.
- D. The shared network connection and verified branch operation.

75. A climate sensor is repositioned into its required sampling path. What should checks compare?

- A. Only mounting fit without a sensor-response test.
- B. Actual sampled conditions and specified sensor or control response.
- C. Only one favourable static display.
- D. A fixed simulated input during ordinary operation.

76. A programming procedure specifies retaining the final scan report. What should documentation preserve?

- A. Actual identifiers, relevant codes and verification results.
- B. Only the tool's purchase receipt.
- C. Only a generic update-complete statement.
- D. A similar vehicle's successful report.

77. A supplied shaft clearance is 0.30 mm and the target is 0.18 mm. What reduction is calculated?

- A. 1.667 mm.
- B. 0.012 mm.
- C. 0.12 mm.
- D. 0.48 mm.

78. A body water leak occurs only during the prescribed local spray at one seam. Adjacent areas pass and the first visible entry appears directly behind a failed seam seal. What is supported?

- A. Masking the interior collection point without source repair.
- B. Replacing every window because the cabin is wet.
- C. An HVAC drain as the proven entry despite its passed check.
- D. The localized seal and surrounding assembly need assessment.

79. Why should an alignment repair also verify adjusted-joint retention?

- A. Retention is unnecessary if the steering wheel is centred.
- B. A good printout automatically tightens every joint.
- C. The measured geometry must remain secure during operation.
- D. More tire pressure permanently locks adjustment.

80. A brake-pedal linkage is repaired for excessive free movement. What should completion verify?

- A. Only whether the pedal can be pressed.
- B. Specified geometry, pressure response and required braking function.
- C. Deleting the travel measurement from the check.
- D. Only fluid level at rest.

81. What is the wheel bearing's principal mechanical role?

- A. Support the specified wheel rotation and loads.
- B. Regulate the hydraulic pressure at the caliper.
- C. Set every tire's inflation electronically.
- D. Force both wheels to turn at identical speed in every corner.

82. A climate sensor reports a normal value, but its installation shields it from the specified sampled air and its response is delayed outside the supplied criterion. What needs correction?

- A. A larger compressor without input checks.
- B. Refrigerant addition as sampling repair.
- C. The sensing location or airflow and required response.
- D. Acceptance from one plausible static number.

83. A vehicle's park display is correct, but the prescribed mechanical inspection finds a broken pawl interface and holding fails. What should diagnosis recognize?

- A. The display proves the vehicle cannot move.
- B. The physical park function fails independently of correct indication.
- C. Battery replacement as pawl engagement.
- D. A new selector label as mechanical repair.

84. An EV limits propulsion because a motor-temperature input reports excessive heat. Independent temperature is acceptable, and the prescribed input test identifies a biased sensor. What should be diagnosed?

- A. A larger HV fuse as temperature correction.
- B. Higher drive demand to override protection.
- C. Immediate motor replacement from the limit alone.
- D. The sensing path and appropriate protective response.

85. What does electrical resistance represent in the stated circuit model?

- A. Opposition to current flow through the represented path.
- B. The exact software version of the controller.
- C. The mechanical speed of a rotating accessory.
- D. The physical volume of battery electrolyte.

86. A common data splice is repaired. What should completion verify?

- A. Leaving an expected module disconnected.
- B. Only splice covering without its required physical checks.
- C. Specified splice assembly and affected communication.
- D. Only one response without checking the complete segment.

87. A wheel-end complaint is checked both stationary and under the approved loaded method. Why should both results be interpreted by their scope?

- A. Some defects appear differently with operating load.
- B. A stationary pass proves every loaded condition.
- C. Loaded testing replaces all fastening checks.
- D. Any noise automatically identifies the bearing.

88. A structural steering support is replaced, but its specified mounting sequence was not followed. The required final movement test still fails. What remains?

- A. A software reset as mounting correction.
- B. Higher tire pressure to conceal movement.
- C. Acceptance because the new housing is uncracked.
- D. Resolve the assembly and structural operating condition.

89. A brake pedal has excessive motion before pressure rises. The prescribed hydraulic hold test passes, but its measured mechanical linkage free movement is above the supplied limit. What should be assessed?

- A. More fluid above the prescribed level.
- B. The pedal actuation geometry and required free movement.
- C. Master-cylinder replacement from travel alone.
- D. A larger booster to remove mechanical play.

90. A vehicle is supported for suspension removal, but a load-bearing arm is to be disconnected while its spring remains compressed. What must be resolved?

- A. Only the wheel fastener's tightening state.
- B. Only the mechanic's distance from the arm.
- C. The approved spring restraint and support sequence.
- D. Only whether the vehicle's engine is off.

91. A clutch-release noise appears when its bearing is loaded. The prescribed inspection finds that bearing rough, while related shaft and hydraulic checks pass. What should be assessed?

- A. The passed hydraulic cylinder as the sole cause.
- B. The release bearing and its specified contact interfaces.
- C. The selector display as mechanical contact correction.
- D. A different final-drive ratio as bearing repair.

92. One missing node has valid power and ground. At its connector, a prescribed test confirms the data pair is open upstream while its disconnected component check passes. What should be assessed?

- A. The localized data connection before node replacement.
- B. The passed node solely because it is missing.
- C. A larger power fuse as bus continuity.
- D. Every unrelated recipient's software.

93. A pressure difference is high across an HVAC component. The prescribed test identifies a local obstruction, while sensor readings match independent measurements. What is supported?

- A. A larger blower fuse as passage clearing.
- B. Replace both sensors despite their verified accuracy.
- C. An arbitrary pressure offset in software.
- D. Assess the identified restriction and connected circuit.

94. A supplied recharge target is 575 g and recorded addition is 525 g. What additional mass reaches that target?

- A. 1,100 g.
- B. 575 g.
- C. 0.05 g.
- D. 50 g.

95. Why should electrical splices follow the approved connector or repair system?

- A. Any twisted wire is equivalent if it works briefly.
- B. The joint must meet contact, retention and environmental requirements.
- C. More tape automatically lowers connection resistance.
- D. Solder alone qualifies every vehicle circuit.

96. A normal enabling input is repaired, but output operation still occurs in a prohibited state during its required test. What remains?

- A. Resolve and verify the complete control sequence.
- B. Suppressing the input check permanently.
- C. Acceptance because the original open is fixed.
- D. Replacing a passed load without evidence.

97. A remotely operated accessory can move into a technician's working space. A local stop does not disable its remote command path. What is needed?

- A. Only leave the local switch in its off position.
- B. Only ask the technician to move quickly.
- C. Control all relevant actuation paths under the work procedure.
- D. Only remove a cover from the mechanism.

98. An airflow seal replacement passes its leak test, but the sensor's prescribed response still disagrees with the independent reference. What remains?

- A. Acceptance because the original gap is closed.
- B. Removing the reference check from the record.
- C. Adding another seal to alter the displayed value.
- D. Diagnose the separate measurement discrepancy and verify both functions.

99. A pad's recorded thickness was 10 mm and is now 7.5 mm under the stated measurement method. What percentage of the initial thickness has been lost?

- A. 133.3%.
- B. 2.5%.
- C. 25%.
- D. 75%.

100. A switched load has correct power and ground, but its current is zero because the prescribed component test identifies an open winding. What is supported?

- A. Battery replacement despite correct loaded delivery.
- B. The local load's internal path needs assessment.
- C. The command input is necessarily missing.
- D. A larger supply fuse as winding repair.

101. A fuel-system replacement restores delivery, but its electrical connection is not retained under the supplied check. What must be resolved?

- A. Correct retention and verify the installed system.
- B. Acceptance from one delivery observation.
- C. A higher pump command to stabilize the plug.
- D. Permanent tape as universal locking hardware.

102. An air-suspension height circuit is repaired. What should verification compare?

- A. Actual body height, sensed information and required control response.
- B. A fixed simulated height as customer operation.
- C. Only the compressor's sound.
- D. Only the absence of a warning at rest.

103. An EV ready sequence fails because interlock information is invalid. Inspection under the HV procedure finds a required service connector only partly latched, and correct engagement restores the specified state. What is supported?

- A. Permanent interlock bypass for normal driving.
- B. A larger low-voltage battery as latch repair.
- C. Traction-motor replacement is proved necessary.
- D. The identified connector engagement caused the missing condition.

104. A steering structural inspection uses a supplied acceptance criterion. What should the technician record?

- A. Only that the wheel can be turned.
- B. Actual observed condition and the criterion used for disposition.
- C. Only a general satisfactory appearance.
- D. A replacement decision without the relevant finding.

105. A transmission control-configuration repair restores the engine torque request. What should verification include?

- A. An unrelated vehicle's satisfactory shift test.
- B. Only the transmission's command display.
- C. The required coordinated response and original shift condition.
- D. Only a cleared message fault.

106. An electrical load works from the approved local test but not normally. Its required enabling input stays false because a verified switch circuit is open. What should be assessed?

- A. Immediate load replacement despite demonstrated response.
- B. The normal input path and control decision.
- C. Permanent bypass as normal operation.
- D. A larger fuse as input continuity.

107. A restricted HVAC component is replaced after diagnosis. What should completion restore?

- A. Only starting the compressor once.
- B. Only matching the removed part's exterior size.
- C. An unverified bypass around the new component.
- D. Required cleanliness, containment and circuit operating performance.

108. A network value agrees at its source and first recipient but differs after an incorrectly configured translation gateway. The approved configuration record identifies the wrong mapping. What is supported?

- A. Replace the valid source sensor.
- B. Change every conductor's resistance to rescale data.
- C. Correct the translation setup and verify downstream information.
- D. Increase battery voltage to correct the mapping.

109. An HVAC test requires identified refrigerant and the specified running state. What should setup establish?

- A. Both requirements before interpreting pressure data.
- B. Only the previous service quantity.
- C. Only that fittings can be attached.
- D. A generic chart regardless of fluid or state.

110. A throttle diagnosis requires checking both requested and physical movement. Why should they be compared?

- A. Physical movement guarantees every input is accurate.
- B. One displayed angle replaces all mechanical inspection.
- C. A command can be valid without the mechanism achieving it.
- D. Command always proves physical travel.

111. What does a refractometer measure for an approved vehicle-fluid test?

- A. Hydraulic pressure while the pump operates.
- B. An optical property interpreted through the applicable fluid scale.
- C. The exact volume of fluid in the circuit.
- D. Every additive's chemical identity directly.

112. A brake-pressure input disagrees with an independent approved gauge. Its circuit responds to the prescribed substitute normally, but the original sensor response fails. What is supported?

- A. Receiver replacement despite valid substitution response.
- B. A master-cylinder repair solely from the indicated value.
- C. Adding fluid as input calibration.
- D. The pressure sensing assembly and its local path need assessment.

113. A circuit's stated 36 W load operates at 12 V. Using $\text{current} = \text{power}/\text{voltage}$, what value results?

- A. 3 A.
- B. 0.333 A.
- C. 432 A.
- D. 24 A.

114. A supply fuse opens during one component's permitted test. Disconnecting that load stops the overcurrent, and its separate check confirms an internal short. What is supported?

- A. Install a permanent larger fuse.
- B. Bridge protection to complete ordinary operation.
- C. Resolve the localized load fault and verify its protected circuit.
- D. Replace all independent loads first.

115. What is the purpose of an evaporative canister in its specified fuel system?

- A. Measuring every injector's electrical current.
- B. Holding fuel vapour for the controlled purge process.
- C. Pressurizing the liquid fuel rail directly.
- D. Setting spark timing through a mechanical linkage.

116. A suspension support is reoriented correctly. What should final checks confirm?

- A. Specified retention and clear motion through its operating range.
- B. Driving with the remaining contact unresolved.
- C. Only the old road-test report.
- D. Only datum alignment without checking full movement.

117. A network test requires documenting each disconnected branch and restoring it afterward. What should the technician record?

- A. Only the final number of codes.
- B. A presumed restoration without field confirmation.
- C. Only module brand names.
- D. Original state, test change, result and verified restoration.

118. A charging thermal valve is repaired. What should completion confirm?

- A. Required valve motion, fluid condition and charging response.
- B. Permanent valve locking without the normal strategy.
- C. Only disappearance of a stored code.
- D. Only actuator noise.

119. An open-winding electrical load is replaced. What should checks include?

- A. Only the replacement's continuity at rest.
- B. A permanently forced command for customer use.
- C. Only that a code clears.
- D. Specified assembly, operating current and required response.

120. A mirror feedback circuit is repaired. What should operating checks compare?

- A. Only one visible movement.
- B. Actual angle, reported state and required command response.
- C. A fixed position input used permanently.
- D. Only that the connector fits.

121. A gearbox bearing repair restores noise behaviour, but a required shaft clearance check remains outside its supplied range. What must be resolved?

- A. A software reset as spacer adjustment.
- B. More lubricant to conceal clearance.
- C. The assembly setup and complete dimensional acceptance.
- D. Acceptance from quieter operation alone.

122. A shaft oscillates under rotation. The prescribed check finds excessive runout at a damaged locating flange, while the shaft itself meets its separate straightness test. What needs assessment?

- A. A new control module as mechanical alignment.
- B. The flange location and installed rotating relationship.
- C. More lubricant as flange straightening.
- D. Shaft replacement despite its passed geometry test.

123. A shorted load is replaced after diagnosis. What should the protection arrangement retain?

- A. The specified circuit protection and normal control functions.
- B. An oversized fuse left from troubleshooting.
- C. The temporary unprotected test jumper.
- D. Permanent disconnection of the warning circuit.

124. What does an HV service disconnect provide within its specified arrangement?

- A. A replacement for every required protective procedure.
- B. Automatic proof of zero voltage at every work point.
- C. Removal of all stored energy without further checks.
- D. A defined circuit-separation function used in the service sequence.

125. A heating-supply fault is repaired. What should verification include?

- A. Only a brief blower run.
- B. Leaving recirculation fixed to conceal weak heating.
- C. Actual warm-up and cabin heat under the relevant prescribed conditions.
- D. Only clearing engine temperature history.

Practice Exam 17: Answer Key and Explanations

- 1. C** — The source produces the required output while the localized connection loses an excessive amount before delivery. Diagnose that repaired path under the circuit procedure. A low destination reading is not automatic proof of generator failure when the simultaneous measurements identify resistance between the valid source and the receiving point.
- 2. A** — Improved timing and compression establish progress but do not replace the inspection required for potential consequences of the misassembly. Follow the engine-specific process and verify the final condition. Another part or fluid addition cannot demonstrate that the affected mechanical interfaces are sound merely because the engine now produces better readings.
- 3. C** — The ratio correction must be followed by the complete installation checks assigned to the axle and driveline. Packaging is identification evidence but not proof of installed condition or function. Verify the actual assembly before release rather than relying on warnings or using ordinary customer operation to discover an unfinished connection or compatibility issue.
- 4. B** — The sensing and physical condition pass while the control's documented comparison is wrong for the application. Restore the authorized setting and verify the warning behaviour. Altering tire pressure to satisfy an incorrect threshold would change a correct vehicle condition rather than repair the identified configuration used to interpret it.

- 5. D** — The replacement needs the applicable initialization and must respond correctly in the installed system. A cleared code or one unloaded position cannot establish its operating range and control relationship. Follow the actual procedure rather than altering stops informally, which can change mechanical conditions without qualifying the specified assembly function.
- 6. D** — The physical gap changes the intended relationship between airflow and its measurement at the recently disturbed component. Restore and verify that path before assigning sensor replacement. Trim behaviour alone would not identify a cause, but the actual missing seal and controlled leak result provide a direct installation fault candidate.
- 7. B** — The heater cannot provide the intended duty if its actual heat source does not meet the required condition. Diagnose the failed warm-up function before replacing satisfactory ventilation components. The complaint needs separation of air delivery from thermal availability, using the independent coolant evidence rather than assuming every weak cabin-heating result originates in the HVAC case.
- 8. A** — The repair must restore fluid movement as well as suitable assembly and sealing. Use the prescribed checks rather than shaft rotation alone, because that was possible even when the impeller did not follow correctly. Fan changes cannot demonstrate the internal motion-transfer function that the diagnosis identified as defective.
- 9. C** — The comparison needs readings representing the same electrical demand and operating strategy. Otherwise their difference can reflect changed conditions rather than loss in the measured path. A resting observation or instrument display size does not establish delivery under another state, so document and reproduce the relevant load for meaningful diagnosis.
- 10. D** — The numerical meaning depends on the defined parameter, scale and units, not simply successful receipt. Communication integrity does not establish that a physical measurement is accurate or interpreted correctly. Confirm the applicable information before comparing values, especially where a tool or gateway displays data from more than one source or network.
- 11. A** — Mechanical engagement does not establish the electrical state required for service access. Use valid suitable equipment and follow the full verification sequence. A failed check prevents relying on the measurement chain, while averaging uncertain values or opening the assembly would substitute unverified inference for the required demonstration before exposure.
- 12. B** — The wrench applies torque using its rated range and procedure. It does not directly determine material properties or guarantee the same clamp force under every friction condition. Fastening acceptance therefore also depends on the required hardware, lubrication, sequence and setup rather than a numerical wrench setting alone.
- 13. C** — The prescribed checks and restored-path comparison link the complaint to an unavailable thermal function. Resolve the valve through the applicable procedure and verify continuing operation. Charging can depend on cooling conditions, so the stop is not itself proof of charger failure when normal function returns with its required thermal route available.

- 14. A** — Divide air mass rate by fuel mass rate: $14.4 \div 1.2 = 12$. Both rates share grams per second, so their units cancel. This is the supplied mass ratio, not a universal target for all fuels or operating conditions, and it does not identify why a real engine reaches that mixture.
- 15. B** — Subtract the reference from the indication: $79.92 - 80.00 = -0.08$ mm. The negative result means the instrument reads low at that point. This check does not establish a universal correction across the entire range; follow the instrument procedure before using its measurements for component acceptance.
- 16. C** — A correct component can still be installed incorrectly. Restore the specified orientation and verify its operating envelope before assigning unrelated vibration repairs. Identity does not establish physical placement, and tire movement or a higher damper force cannot remove contact caused by the support's actual assembly relationship with the vehicle body.
- 17. D** — Substitution provides controlled evidence about the receiving path under its defined setup. It does not automatically identify the original component without checking its local connections and actual condition. Use the result with the procedure's other tests rather than treating one induced response as universal qualification of unrelated structures or systems.
- 18. C** — The fluid transmits hydraulic pressure through the system designed for that function. Its specified properties and containment matter to operation. It does not directly establish alignment or electronic data, and hydraulic pressure alone still needs a suitable friction and mechanical assembly to produce the intended braking result at the wheel.
- 19. D** — The instrument and connection must remain suitable for their actual exposure as well as the pressure range. Follow the specified protective arrangement. A scale change does not improve temperature resistance, and improvised positioning near exhaust or moving components does not establish a valid safe measurement setup.
- 20. A** — The system must compare valid wheel information with the right configuration and respond as specified. Verify all relevant relationships under the procedure. One cleared icon or parameter entry does not demonstrate correct operation, and an unverified setting cannot serve as the basis for changing otherwise suitable physical tire conditions.
- 21. B** — Feedback represents the defined quantity at its actual sensing point. It does not universally prove an intact downstream linkage or forecast component life. Identify its source and meaning before interpretation, because an actuator can report its own movement while a disconnected driven mechanism fails to follow the command.
- 22. A** — Local function and installed interpretation are different requirements. Resolve the documented configuration so the valid sensor output describes pressure correctly to the control system. A blind hydraulic repair does not change the receiving scale, and arbitrary warning suppression cannot establish the measurement relationship required by the actual vehicle application.
- 23. D** — The repaired system has not met its actual holding requirement. Resolve the remaining physical fault under the prescribed safe process, accurately retaining the result. Normal indication describes

another function and cannot overrule a failed retaining test, while unrelated engine adjustment or documentation changes do not make the vehicle's park mechanism acceptable.

24. C — The belt can drive the shaft without the loose impeller transferring the intended coolant flow. The physical finding narrows the circulation fault beyond a general overheat symptom. Assess the pump and associated system through the procedure rather than changing passed components or using overfill to conceal an internal mechanical connection problem.

25. B — The replacement must report the actual condition and support the assigned protection and operation. Verify those functions through the approved process. Clearing history and forced movement do not establish accuracy, while disabling a limit removes the required condition-based safeguard instead of demonstrates that the repaired sensing system now provides valid information.

26. B — The mirror demonstrates mechanical drive while its feedback does not represent that actual movement. Diagnose the identified sensing path rather than treating the whole assembly as motionless. Successful actuation and valid reporting are different functions, and changes to protection cannot restore a failed position signal in the required control relationship.

27. A — The independent physical measurement and localized electrical fault distinguish false indication from body movement. Restore the sensing path and verify it under the procedure. A changing height value can affect control decisions, but it does not prove actual suspension motion when the measured body state remains unchanged during the same event.

28. C — The splice still needs the installation conditions that protect its restored electrical integrity. Correct the strain path and verify the relevant movement. A stationary loaded pass is useful but cannot qualify a repair that is mechanically pulled beyond its assigned arrangement, and electrical protection or software does not provide physical support.

29. D — The pre-start step is assigned to establish the repaired system's required condition before operation. Follow it and its checks. Reservoir inventory alone does not demonstrate that every relevant supply path is prepared, while starting or suppressing indication would bypass rather than complete the readiness requirement defined by the procedure.

30. D — The movement-triggered electrical fault explains a changing indication while the real measured condition stays steady. Restore the local signal path and required protection, then verify the trigger. Display behaviour is not a component verdict when the actual circuit test identifies a conductor fault that can distort a satisfactory sensor's information.

31. B — Divide minimum by maximum and multiply by one hundred: $168 \div 210 \times 100 = 80\%$. This reports the stated comparison and does not define a universal engine limit. The applicable test conditions and engine criterion must govern interpretation before the result is used to support a repair decision.

32. A — A sensor can accurately report an incompatible target's physical pattern. The documented mismatch provides a mechanical application issue to resolve before condemning the electrical sensing path. Verify the correct target and relationship through the engine procedure; supply changes cannot make the wrong pattern equivalent to the specified synchronization reference.

- 33. C** — Approved coding must match the vehicle's defined functions and supported hardware. A warning disappearing after an arbitrary change is not evidence of correct configuration. The process does not mechanically repair conductors or qualify incompatible components, so the authorized parameter relationship and subsequent operating checks remain essential to proper replacement or setup.
- 34. C** — The port arrangement determines the intended vapour paths and must match the actual application. Verify identity and engagement as well as function. Similar diameters and engine operation do not establish correct routing, while unreviewed hose swapping can create another control or flow condition rather than complete the specified replacement.
- 35. D** — The controlled adapter change and failed equipment check identify a diagnostic-chain problem. Resolve it before using the access failure as evidence of a vehicle defect. Tool compatibility and connection integrity are part of valid testing; a vehicle should not receive unnecessary component repair to compensate for equipment that cannot meet its own requirements.
- 36. A** — Divide the counted bits by duration: $1.8 \div 0.6 = 3$ million bits per second. This describes the stated recording model, not necessarily a network's configured physical rate. Capture filtering, overhead and what the count includes must be understood before the figure is interpreted as actual bus throughput.
- 37. B** — Multiply the supplied length, coefficient and change: $300 \times 0.000012 \times 50 = 0.18$ mm. The relationship describes free expansion in the simplified model. Actual clearances and constrained loads need the component's applicable design and service information, so the calculated movement is not itself an assembly tolerance.
- 38. D** — The symptoms follow timing work, and the actual mechanical reference is incorrect while cranking supply is suitable. Correct and verify that condition before assigning other repairs. Compression readings alone would not establish its cause, but the independent timing evidence provides a direct path that fuel or starter changes cannot restore.
- 39. B** — The request is delivered, but the receiving control's identified configuration does not support its required action. Resolve that relationship before assigning internal transmission damage. Shift behaviour involves coordinated functions, so valid transmission commands alone do not prove the engine performs the torque response assigned by the actual vehicle strategy.
- 40. A** — The independent tests locate an external supply mismatch rather than a demonstrated internal actuator defect. Restore the correct circuit and verify the pressure-control response. A valid request alone cannot energize a misconnected path, so component replacement would ignore the actual installation condition identified after the harness repair.
- 41. C** — The controlled location and inspected damage provide direct evidence at the output support. Use the applicable gearbox process to assess related consequences and repair. A whine alone has multiple causes, but acceptable gear checks and confirmed bearing pitting narrow the candidate more meaningfully than blanket gear replacement.
- 42. D** — The target must occupy the required relationship and produce the pattern expected by the engine system. Verify installation and signals under the applicable method. Fastening and code clearing

do not establish synchronization, and an unreviewed shim cannot qualify a geometry change outside the specified sensing arrangement.

43. C — The repair needs evidence that the identified entry path no longer admits water under the relevant test. Appearance and adjacent dry surfaces do not establish that outcome. Repeat the prescribed local exposure and inspect the actual path, rather than concealing the collection area before the repaired source is verified.

44. B — Multiply the given pressure by the provided factor: $30 \times 6.895 = 206.85$ kPa. This is a unit conversion, not the recommended inflation for every tire. Actual adjustment must use the vehicle and tire requirements at the specified checking condition rather than treating the example value as a universal target.

45. A — Divide input speed by the specified reduction: $2,800 \div 3.5 = 800$ rpm. This assumes steady operation without additional slip. Multiplying gives a speed increase rather than the stated reduction, while subtracting a dimensionless ratio from rpm cannot describe the physical speed relationship between the two shafts.

46. B — Sealing and structural condition are separate requirements. A successful leak check cannot qualify wheel mounting damage that still fails its assigned criterion. Follow the approved disposition process and verify the final assembly; balancing mass or excess fastener force does not restore proven material integrity or acceptable mounting geometry.

47. D — The event order connects message loss to a preceding sender reset, with the network otherwise operating. Diagnose the supply cause before treating communication as the initiating failure. Stored code count alone would not establish that sequence, but the captured timing helps distinguish a secondary missing message from an independently damaged data bus.

48. A — The procedure must establish acceptable temperature and pressure before the system is opened. A stopped fan or absent warning describes another condition and cannot prove the work point is safe. Do not use initial cap loosening as an uncontrolled substitute for the required assessment and release method.

49. C — Divide actual by target and multiply by one hundred: $720 \div 800 \times 100 = 90\%$. The shortfall is ten percent, a different expression of the same measurements. The target belongs to the supplied test, not every diesel circuit, and actual interpretation still needs the specified operating conditions.

50. B — The verified command and supply separate the missing response from input and delivery alternatives, while the mechanical test identifies a jam. Assess that assembly using the applicable instructions. Increasing fuel or electrical protection would not repair the shaft and could alter safeguards without restoring the controlled air path.

51. D — The separate checks distinguish a component that meets its test from the actual interrupted circuit feeding or sensing it. Restore that connection using the SRS-approved method. Repeating the part replacement would not close the terminal, and simulation or altered protection cannot qualify the intended restraint circuit for normal operation.

52. C — The repair must restore the intended SRS connection and pass the applicable tests before ordinary service. Warning memory and appearance cannot establish circuit integrity. Simulation may serve a defined diagnostic role, but leaving it in place does not verify the physical restraint component and intended circuit that the repair is supposed to restore.

53. A — The replacement introduced a documented mechanical ratio mismatch after the tire condition is verified. Resolve the actual driveline combination under its design requirements. Electrical settings cannot change tooth relationships, and replacing satisfactory tires would ignore the identified alteration in the relative shaft-speed relationship between the driven axles.

54. A — Divide driven tooth count by driving count: $64 \div 16 = 4$. This gives the stated reduction for the pair. Adding or subtracting counts does not represent the speed ratio, and the reciprocal corresponds to the reverse relationship rather than the requested driven-to-driving value.

55. C — The bearing operates within a supported actuation path that must also meet its required condition. Inspect and verify that arrangement and final clutch behaviour. Appearance and a limited stationary selection do not demonstrate acceptable movement under operation, while extra unapproved travel can introduce another mechanical problem rather than complete the specified repair.

56. D — The repair must restore the intended command-controlled path and its actual loaded function. Continuity and appearance alone do not prove correct terminal identity or delivery. A direct bypass may move the component but cannot demonstrate the authorized control relationship and operating pressure response assigned by the vehicle's normal strategy.

57. B — Apply the supplied fraction to capacity: $60 \times 0.15 = 9$ kWh. This uses the problem's simple proportional model and stated usable energy. It is not a direct battery-health test, and an actual vehicle's displayed state or energy accounting can require its own specified method before such an estimate represents physical consumption.

58. A — Correct geometry does not establish that the joint meets every required assembly condition. Restore or obtain authorized disposition for the specified hardware and repeat relevant checks. Paint and arbitrary additional force cannot qualify reuse where the applicable procedure requires renewal of the fastening components supporting the repaired rotating interface.

59. B — Subtract the existing thickness from the supplied target: $4.6 - 3.2 = 1.4$ mm. This arithmetic does not authorize arbitrary stacked material. Follow the actual spacer-selection and setup requirements so the final assembly meets its complete load, clearance and retention conditions rather than only a calculated nominal total.

60. D — The test identifies a physical leak path at the bead rather than the checked valve. Assess both contacting parts and follow the approved disposition method. Sensor learning cannot seal that interface, and excess inflation does not demonstrate the suitable surface condition required for the assembly to retain air normally.

61. C — The device meters refrigerant according to the system's assigned architecture. It is separate from ventilation and coolant-control mechanisms. Actual pressure or temperature symptoms still need

the appropriate operating tests, because a poor result does not automatically identify that metering component rather than another charge, airflow or control condition.

62. D — The substitute proves the input can be interpreted, while inspection identifies a local sensing mechanism stuck in the wrong state. Resolve that path before condemning the receiver. A lit lamp alone does not prove the lamp itself defective; it can correctly respond to an inaccurate door condition supplied by the switch.

63. B — The service fluid and cylinder must be identified for compatible handling and equipment use. Pressure and fitting appearance do not establish contents. Mixing unknown material can create another contamination or handling problem rather than resolve the uncertainty required before connecting the cylinder to the service process.

64. C — The check must assess holding while controlling the risk of vehicle movement under the approved arrangement. A display describes an input or indicated state, not safe mechanical restraint. Unattended testing or engine speed cannot establish the setup needed to verify a potentially faulty park mechanism without exposing personnel or surroundings.

65. A — The moving assembly must remain suitable throughout its assigned range, not only while parked at a favourable position. Complete retention and clearance checks using the actual instructions. Package dimensions do not establish the installed relationship, and deleting a stop changes the designed envelope rather than qualifies a remaining interference.

66. A — The input reports the state assigned by the sensor arrangement for control and indication. It does not directly prove that every mechanical path engages or carries torque. Correct sensing, linkage and actual operation need their applicable checks, so one reported range should not be treated as complete transmission acceptance.

67. B — Multiply the localized loss by current: $0.16 \times 25 = 4 \text{ W}$. This calculates power dissipated at that measured condition, not total circuit power. The actual acceptance still needs its specified voltage-drop limit and operating state, so the numerical result alone cannot identify the correct repair location or permitted loss.

68. C — The support must carry the steering loads through a suitable structural path, and the prescribed test demonstrates movement at a housing whose crack fails the supplied criterion. An operating assist motor proves another function and cannot qualify that structure. Apply the approved material and assembly disposition, then repeat the required loaded checks. Extra tightening or calibration may change an observation without restoring the damaged load-bearing interface, so neither is a substitute for verified structural acceptance.

69. D — The controlled restoration connects the apparent change to the measuring setup. Secure and verify the reference before interpreting vehicle behaviour. A trace is evidence only within its valid connection conditions; changing a specification or replacing components from a known faulty reference would confuse measurement failure with a demonstrated vehicle fault.

- 70. A** — Subtract elapsed time from the supplied interval: $12 - 7 = 5$ minutes remaining. The interval is an explicit problem instruction, not a universal HV discharge time. Completing it still does not replace the sequence's next verification step; follow the actual model-specific procedure and required measured conditions before handling the work point.
- 71. D** — Add the two stated collected amounts: $0.42 + 0.18 = 0.60$ L. This documents the provided operation, not a universal brake-system service volume. Actual completion still needs the prescribed fluid condition, sequence and functional evidence rather than the amount from another scenario's numerical record.
- 72. B** — The information path now appears corrected while the actual output function remains unverified or faulty. Follow the applicable tests for command delivery and response. A valid display is one part of system operation, and arbitrary data manipulation cannot establish the proper control relationship or identify why the real output still fails to act.
- 73. C** — The thermostat changes the cooling circuit's flow relationship according to its specified temperature behaviour. It is not an electrical ignition or fastening component. Its actual design and installation matter, so an overheat or slow-warm-up complaint still needs applicable tests rather than assuming the thermostat is faulty from temperature symptoms alone.
- 74. D** — The open common path explains the group failure despite suitable individual supplies. Repair and verify that segment using the approved network method. Multiple missing modules do not necessarily indicate multiple internal defects when a shared connection has been independently identified as interrupting the data they require.
- 75. B** — The repair concerns the relationship between the physical condition and sensing behaviour. Verify that relationship and the relevant strategy response under the procedure. A plausible stationary value cannot demonstrate tracking during changes, and permanent simulation removes the actual information the system needs rather than proves restored sampling and control.
- 76. A** — The report should describe the installed system after its actual programming and checks. A generic statement or another vehicle's evidence cannot establish this module's identifiers, unresolved conditions or completed operation. Follow the documentation requirements so later diagnosis can compare a verified final state rather than an assumed software outcome.
- 77. C** — Subtract target from the measured clearance: $0.30 - 0.18 = 0.12$ mm reduction. The numerical difference does not authorize a particular shim or material. Use the applicable setup method and related checks so correcting this dimension also preserves the complete bearing and movement requirements of the assembly.
- 78. D** — The controlled area-by-area test and first observed path localize entry at the seam rather than merely where water collects later. Assess and restore that assembly through the body procedure. A wet cabin has several possible sources, but this evidence does not justify indiscriminate window or unrelated drain replacement.

- 79. C** — Adjustment establishes a value while retention maintains the physical relationship carrying it. Follow the complete assembly and fastening procedure. A printout or centred wheel is not mechanical locking evidence, and tire pressure cannot provide the securing function assigned to the adjusted joint's actual hardware.
- 80. B** — The repair needs the intended mechanical relationship and the resulting hydraulic or braking response. A moving pedal and correct inventory do not establish accepted free travel. Complete the applicable measurements and function checks so the identified actuation fault is actually corrected rather than omitted from final documentation.
- 81. A** — The bearing supports rotation and the loads assigned by the wheel-end design. It is separate from differential, brake-regulation and inflation functions. Correct setup and condition remain essential, so free turning alone does not establish suitable play, retention or performance under the actual specified wheel loads.
- 82. C** — A static plausible value does not establish that the sensor tracks the environment the strategy needs to measure. Restore the specified exposure and verify response. The installation can distort timing without an obviously impossible number, so the actual sampling relationship matters before assigning refrigerant or compressor changes to a control complaint.
- 83. B** — The system can report the intended range while the actual retaining mechanism is broken. Resolve that mechanical fault through the transmission procedure. The failed holding test and physical evidence are more direct than the display, and a label or power-source change cannot replace the required load-bearing park interface.
- 84. D** — The independent measurement and defined sensor test distinguish inaccurate input from actual overheating. Restore and verify that path before treating reduced propulsion as proof of a damaged motor. Protection can be responding to reported conditions, and overriding it does not establish the real thermal condition or repair the measurement that informs the strategy.
- 85. A** — Resistance describes a circuit property relevant to current and voltage under the applicable model. It is distinct from mechanical motion and software identity. Real automotive components can vary with temperature or control state, so a resistance value must still be measured and interpreted through the correct procedure rather than assumed constant everywhere.
- 86. C** — The repair serves several paths, so verify its correct physical arrangement and the required responses across the affected segment. One favourable node does not prove every branch is restored. External appearance or omitted components cannot establish the complete network configuration intended for the released vehicle.
- 87. A** — The setup determines which behaviour each observation can establish. Use the specified loaded method where relevant instead of accepting a quiet or free stationary component as universally sound. Neither test automatically identifies every fault or replaces the required assembly checks, so combine the results with actual location and condition evidence.

- 88. D** — The correct new material does not qualify an installation that fails its required loaded movement check. Restore or disposition the assembly through the applicable procedure and verify it. An uncracked housing is one condition, while fastening and structural interfaces must also establish the intended support under the actual test load.
- 89. B** — The tests distinguish a holding hydraulic circuit from excessive motion in its actuation linkage. Assess that mechanical relationship using the applicable brake procedure. Pedal travel alone could have multiple causes, but the measured free movement provides a localized condition that added fluid or assist cannot qualify or remove.
- 90. C** — The arm connection can release stored spring force when removed. Establish the specified restraint and support arrangement before disconnection. Engine shutdown and wheel fasteners do not control that mechanical energy, and distance alone is not a substitute for a verified load path during the authorized removal sequence.
- 91. B** — The load-sensitive symptom and direct rough-bearing finding localize an actuation-interface condition after related checks pass. Assess it through the clutch procedure. A pedal-related noise alone would not identify one part, but the prescribed inspection supplies mechanical evidence that should not be ignored in favour of unrelated ratio or display changes.
- 92. A** — The test separates the node's acceptable conditions from an interrupted network path leading to it. Repair and verify that connection before condemning the component. A missing scan response is a symptom rather than a module verdict, particularly when the actual route carrying communication is independently shown to be open.
- 93. D** — The independent measurement agreement supports the actual pressure condition, and the defined test localizes an obstruction. Assess that passage through the approved procedure. A high reading alone would not determine cause, but it should not be dismissed as sensor failure once suitable reference measurements and a separate restriction check provide converging evidence.
- 94. D** — Subtract the recorded addition from the given target: $575 - 525 = 50$ g. The calculation follows this operation's stated mass accounting. It does not justify charging by expected pressure appearance or provide a quantity for another vehicle; actual completion must use the specified fluid and service process for the repaired system.
- 95. B** — The repair system defines how to restore the complete electrical and physical connection for its location. Brief operation does not establish retention or long-term protection. A single material is not universally suitable, and tape cannot automatically correct poor conductor contact, so use the actual method required by the vehicle and circuit.
- 96. A** — The original circuit fault is corrected, but the defined sequence still fails an independent requirement. Diagnose the remaining control relationship through the applicable procedure. One repaired path does not establish every permitted and inhibited condition, and deleting the check or replacing a satisfactory output cannot substitute for verified correct strategy behaviour.

97. C — The remote path remains capable of producing movement despite the local state. Establish the complete authorized isolation or control arrangement before work enters the movement zone. Speed and cover removal do not prevent an external command from changing the mechanism's condition during the task.

98. D — The air boundary and sensing accuracy are distinct requirements. The sealed path is improved, but the remaining response conflict needs diagnosis under the applicable method. More sealing material or record changes cannot establish a valid measurement, and one corrected fault should not be treated as proof that every related function is satisfactory.

99. C — The thickness loss is $10 - 7.5 = 2.5$ mm. Divide by the initial ten millimetres and multiply by one hundred to obtain 25%. This historical comparison does not identify a legal replacement threshold or predict future life; current acceptance needs the applicable pad criteria and wear-condition inspection.

100. B — The external paths are verified while the component test identifies an internal interruption. Assess that load under the procedure rather than assigning a supply fault from no current alone. Electrical delivery and component continuity are different requirements, and altered protection cannot close a failed winding inside the commanded assembly.

101. A — The system needs durable electrical connection as well as a favourable delivery result. Restore the approved latch or housing condition and repeat applicable tests. One operating observation cannot qualify a terminal that can separate, and pump command cannot provide the mechanical retention assigned to the connector assembly.

102. A — The circuit must report the real vehicle condition and support the assigned leveling strategy. Verify physical and data relationships under the procedure. A warning-free resting state or audible compressor is limited evidence, and simulation removes the actual height input rather than proves that the repair now follows real suspension movement.

103. D — The controlled engagement change restores the monitored condition at the actual connector. Verify the complete assembly and required sequence rather than bypassing that safeguard. The original no-ready symptom alone would not identify a component, but the local inspection and repeatable state response provide direct evidence about this connection's role in the fault.

104. B — The decision needs evidence tied to the prescribed inspection and acceptance requirement. Functional movement alone does not demonstrate structural suitability. Record the actual finding so the repair can be reviewed and later compared, rather than treating a broad visual impression or an unsupported parts choice as complete diagnostic justification.

105. C — The repair must demonstrate that delivered information produces the intended coordinated operation in the actual vehicle. A displayed request was already present during the fault and cannot alone confirm response. Test the relevant engine and transmission behaviour under the supplied conditions rather than accepting a memory change or another vehicle's result.

106. B — The local test demonstrates some load capability while the normal strategy lacks its required input. Restore and verify that path before condemning the output. A working forced response does not

prove complete system function, and a bypass would delete the intended condition rather than repair the actual open switch circuit controlling its request.

107. D — The replacement must restore the system's internal and installed condition as well as provide the intended flow function. Complete the applicable service and performance checks. Dimensional resemblance or a single startup does not prove cleanliness and containment, while a bypass changes the architecture instead of verifying the repaired component's assigned duty.

108. C — The value stays correct through the source and first receiving path, then changes at a gateway with an identified mapping error. That comparison localizes interpretation or translation rather than proving the original sensor wrong. Restore the approved configuration and verify downstream behaviour. Reliable electrical reception does not guarantee correct information after an incompatible conversion. A wiring-resistance or supply change cannot establish the required units and scale assigned by the vehicle's actual message definition.

109. A — Pressure interpretation depends on the actual refrigerant and operating conditions. Confirm them before comparison with the applicable vehicle information. Fitting access or historical quantity cannot make another fluid's chart valid, and a generic state can produce a misleading conclusion even when the instruments themselves function correctly.

110. C — The comparison separates what the controller requests from what the actual air-control mechanism does. Both can differ through circuit or mechanical faults. A displayed request is not proof of movement, so follow the specified feedback and inspection checks rather than accepting the throttle assembly from one data parameter alone.

111. B — The instrument measures an optical response that is interpreted using the correct fluid-specific method. It does not universally identify every additive or report circuit volume. Product compatibility and the appropriate scale matter, so an optical reading should not be treated as complete proof of an unknown fluid's suitability.

112. D — The reference measurement and controlled response separate real hydraulic pressure from inaccurate sensing. Diagnose that local input before changing pressure-generating parts. A displayed discrepancy alone would be incomplete evidence, but the prescribed sensor result supplies localization that should not be overridden by a blind hydraulic replacement decision.

113. A — Divide the supplied power by voltage: $36 \div 12 = 3$ A. This uses the stated fixed operating model. A real controlled or changing load may require direct current and waveform measurement, so the calculation does not establish every actual component's performance outside the assumptions explicitly given by the scenario.

114. C — Controlled isolation and the separate component result localize the excess demand. Correct that load using the applicable method and verify the circuit afterward. The opening fuse is evidence of protection responding, not a reason to remove its function or assume every other load has independently failed at the same time.

115. B — The canister manages vapour as part of the evaporation-control arrangement before the specified purge function returns it to the engine path. It is not the liquid pressure source or electrical injector monitor. Its actual layout and related valves still require applicable tests when a refuelling or emissions complaint is diagnosed.

116. A — The corrected reference must be verified as a complete installed assembly, including fastening and movement clearance. A visible mark documents position but not every condition. Repeat relevant checks before operation rather than relying on a report made before the repair or accepting a support that still contacts the body through its required travel.

117. D — The sequence record preserves the relationship between each observation and its test setup and helps ensure the final system is complete. Code totals or brand information cannot show which paths were altered. Restoration must be verified rather than assumed, because an omitted reconnection can create an apparent new fault after the original diagnosis.

118. A — The repair must restore the controlled fluid path and the operating behaviour that depends on it. Verify actual movement and system conditions under the procedure. Noise and cleared history do not establish circulation, while a fixed valve position changes the intended thermal-management strategy rather than proves the repaired function responds correctly.

119. D — The replacement must provide the intended function in the installed controlled circuit, not merely a conducting bench path. Verify mounting, current and response under the actual conditions. A cleared message or forced operation does not demonstrate that the normal strategy and protection now work correctly with the repaired component.

120. B — The repaired feedback must describe real mirror movement and support the intended control behaviour. Compare those relationships through the specified range. A moving mirror was possible during the fault, so repeating motion alone does not establish sensing accuracy, while a fixed substitute removes the feedback function rather than demonstrates its restoration.

121. C — Noise improvement does not qualify every internal relationship after assembly. Correct and verify the specified shaft setup using the gearbox procedure. Lubrication and software cannot substitute for the bearing or spacer geometry that determines the measured clearance, so the repaired unit needs both dimensional and operating evidence before acceptance.

122. B — The separate tests distinguish an acceptable shaft from the damaged interface positioning it during rotation. Assess that locating condition before replacing the passed component. Straightness and installed runout are related but different requirements, and neither lubricant nor software can establish the mechanical reference that the flange must provide.

123. A — The completed vehicle must return to its approved protection and control configuration after diagnostic changes. Restore and verify it alongside the replacement's function. Temporary bypasses or altered ratings may have been part of controlled investigation but cannot automatically remain as an accepted ordinary-service arrangement after the fault is resolved.

124. D — The disconnect performs the separation assigned by the vehicle design, but safe service still follows the complete model-specific sequence and voltage verification. It is not universal evidence that every component is de-energized. Stored energy and topology can matter, so use its actual instructions rather than infer safety from one removed device.

125. C — The corrected heat source must reach its requirement and the cabin must receive the intended result in the complaint state. Verify both using the applicable process. Blower motion and memory status do not demonstrate thermal performance, while an altered fixed mode can mask the symptom without establishing the released system's required range of operation.