

PRACTICE EXAM 10: 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 stated ideal divider uses $V_{out} = V_s \times \frac{R_2}{(R_1 + R_2)}$, $V_s = 12 \text{ V}$, $R_1 = 200 \text{ ohms}$, and $R_2 = 100 \text{ ohms}$. What output results?

- A. 36 V
- B. 4 V
- C. 8 V
- D. 6 V

2. What does a transmission output-speed input represent when operating correctly?

- A. The clutch lining's physical thickness directly.
- B. Information related to its defined output rotation.
- C. The gear command supplied by the selector directly.
- D. The hydraulic line pressure directly.

3. An ignition-coil repair includes disturbed plug and mounting connections. What should the complete service restore?

- A. Only clearing the cylinder's misfire history.
- B. Only the old coil's identification.
- C. The specified component fit, electrical engagement, and ignition verification.
- D. Only a new coil fitted loosely for a quick start.

4. A gearbox loses engagement under the required hot condition. Its defined pressure measurement is below criterion and inspection confirms an internal sealing fault, while the command input complies. What is supported?

- A. Selector replacement despite the valid request.
- B. Acceptance from correct command alone.
- C. Speed-sensor replacement as proof of restored sealing.
- D. A fault in the actual hydraulic application boundary.

5. A stated motor-system calculation uses 15 kW electrical input and 12 kW useful output. What useful percentage results?

- A. 80%
- B. 125%
- C. 3%
- D. 20%

6. An accessory repair restores mechanical movement, but its required position-feedback check still fails at a known loose sensor mount. What remains outstanding?

- A. The actual feedback reference and final verification.
- B. Acceptance from correct command alone.
- C. Acceptance from new drive components alone.
- D. Acceptance from movement alone.

7. A driveline coupling clunks under the prescribed load test. One attachment moves beyond its supplied retention criterion, while its rotational bearings pass inspection. What should be addressed?

- A. Bearing replacement despite its accepted checks.
- B. The deficient coupling attachment.
- C. Acceptance because the coupling rotates unloaded.
- D. Tyre inflation as proof of corrected attachment movement.

8. A diagnostic connection needs a specified sensor adapter. What should selection establish?

- A. Only whether the nearest hose reaches it.
- B. Only the adapter's visible resemblance.
- C. Compatibility with the actual component and permitted test conditions.
- D. Only matching thread diameter.

9. Several displayed inputs fail together. The affected module's shared reference supply is shorted by a damaged branch, and restoring that branch recovers the required data. What did the comparison support?

- A. Acceptance before the damaged branch is properly restored.
- B. Independent permanent failure of each sensor.
- C. A mechanical engine failure proven by data recovery.
- D. A common supporting-circuit fault affecting those inputs.

10. A stated circular piston is 50 mm in diameter, $\pi=3.14$, and pressure is 2 N/mm². Using $\text{area}=\pi d^2/4$ and $\text{force}=\text{pressure times area}$, what ideal force results?

- A. 1962.5 N
- B. 3925 N
- C. 15700 N
- D. 785 N

11. After replacing an accessory bearing, the specified noise test passes but its drive fastener is still below the defined retention condition on final inspection. What remains to be completed?

- A. Acceptance from correct thermal readings alone.
- B. Acceptance from new bearing status alone.
- C. The actual assembly retention requirement.
- D. Acceptance from noise recovery alone.

12. An internal connector lock is restored after terminal movement. What should final tests reproduce?

- A. Only a relaxed connector position.
- B. Only the outer housing's identification.
- C. Only terminal position before applied movement.
- D. Actual retention and circuit checks through movement.

13. After a fuel-pump repair, flow meets its stated criterion but the restored electrical connection fails its final retention test and loses supply when moved. What remains unresolved?

- A. The installed supply connection's security.
- B. Acceptance from the stationary flow result alone.
- C. Acceptance from matching connector terminals alone.
- D. Acceptance from the new pump alone.

14. A hybrid thermal pump's control connector is repaired after an opening. What should verification include?

- A. Only deletion of the former history message.
- B. Only a connected outer latch.
- C. Only the pump's earlier separate test.
- D. The prescribed electrical response and actual thermal-system function.

15. A stated ideal battery calculation uses constant 12 V and 4 Ah. What electrical energy in Wh results?

- A. 16 Wh
- B. 0.333 Wh
- C. 48 Wh
- D. 3 Wh

16. What does a supported bidirectional diagnostic test allow the tool to do?

- A. Request a defined control action through the applicable system.
- B. Guarantee the mechanism physically follows every request.
- C. Change every module's software without a separate procedure.
- D. Replace all circuit measurements with code clearing.

17. A panel-induced network wire fault is repaired. What should the final route preserve?

- A. Only an exposed bench continuity check.
- B. The specified protection and continuity with the panel installed.
- C. Only the old panel's photograph.
- D. Only conductor size without the installed protection.

18. Why should accessory diagnosis compare a command with actual movement and feedback?

- A. Movement proves every sensor signal accurate.
- B. A command alone proves every physical response correct.
- C. A feedback value proves every supply connection sound.
- D. They describe distinct stages of the controlled function.

19. An HVAC repair passes its initial integrity test, but a final check shows the specified support omitted and normal movement pulls on the disturbed connection. What remains deficient?

- A. Acceptance from the initial tightness result alone.
- B. Acceptance from normal cabin temperature alone.
- C. The complete protected operating installation.
- D. Acceptance from matching connection size alone.

20. A diesel filter is serviced after confirmed substrate damage. What should the work follow?

- A. Only a repeated temperature-raising procedure.
- B. The approved component disposition, cause correction, and final checks.
- C. Only a loading reset.
- D. Only the outer housing's cleaned appearance.

21. What should a network fault diagnosis distinguish about a module's status?

- A. Communication, supporting power, and actual function are separate attributes.
- B. A scan response proves every module function correct.
- C. A missing response always proves permanent module damage.
- D. A power reading proves every message reaches its destination.

22. A wheel-end assembly passes its measured variation limit, but a required retaining component is missing from final installation. What still needs completion?

- A. Acceptance from geometry alone.
- B. Acceptance from new components alone.
- C. The specified retention and related verification.
- D. Acceptance from one unloaded rotation alone.

23. A parking brake releases at the cabin control but not at one wheel. Its return linkage binds there while the normal service-brake pressure meets its released criterion. What is indicated?

- A. A mechanical parking-brake release fault.
- B. Acceptance from the cabin control's return alone.
- C. A retained service-pressure fault disproved by testing.
- D. A wheel-sensor fault proven by the bound link.

24. A clutch will not disengage. Its actuator completes specified travel, but a cracked mechanical release member fails inspection and does not transmit that travel to the clutch. What is indicated?

- A. Gear-selector coding as proof of release-member recovery.
- B. Acceptance from actuator motion alone.
- C. Hydraulic bleeding despite accepted actuator travel.
- D. The mechanical release-path fault.

25. A gasoline engine's delivery pressure falls under demand. The pump command and installed electrical path comply, but its measured output fails the prescribed independent flow test. What warrants assessment?

- A. Acceptance from the motor's audible operation.
- B. The pump's actual delivery function.
- C. The command source despite its accepted signal.
- D. Ground replacement despite its loaded pass.

26. An HVAC pressure input fails its defined linear comparison, while the independent gauge meets the required physical condition and supply and ground comply. What should be assessed?

- A. Compressor replacement solely from the sensor value.
- B. Charge adjustment solely from the incorrect input.
- C. Acceptance because the physical pressure is normal.
- D. The sensor's measurement response and local signal path.

27. An indicator's readings vary when its support moves, but become repeatable after the required reference setup is restored and verified. What should guide acceptance?

- A. The lowest value selected to avoid correction.
- B. An average that includes the loose-support values.
- C. The valid final reading with its corrected setup recorded.
- D. The earliest unsupported reading alone.

28. A brake pedal's position report stays fixed while independent observation confirms pedal travel. Its local linkage has separated and the supplied input comparison fails. What should be corrected?

- A. Acceptance from normal pedal travel alone.
- B. The position-sensing mechanical relationship.
- C. A physically fixed pedal disproved by observation.
- D. Hydraulic fluid replacement as proof of input recovery.

29. A network module repair affects a shared reference path. What should final tests cover?

- A. Required supporting circuits and affected data.
- B. Only erased history records.
- C. Only module mounting retention.
- D. Only one generic diagnostic response.

30. What does a battery state-of-charge value describe under its applicable model?

- A. A guarantee of the battery's complete health.
- B. A direct measurement of chassis isolation resistance.
- C. The estimated charge state within that model's capacity basis.
- D. A direct measurement of motor mechanical torque.

31. A wheel-end repair includes a disturbed mating surface and required retention method. What should the final assembly preserve?

- A. The specified surface preparation and complete securing procedure.
- B. Only the assembly's new appearance.
- C. Only a suitable disc-thickness reading.
- D. Only matching the removed fastener's length.

32. A transmission repair meets its final pressure criterion, but the operating connector remains loose and interrupts a required signal during the prescribed movement test. What is still deficient?

- A. Acceptance from a stationary scan response alone.
- B. Acceptance from newly installed seals alone.
- C. Acceptance from pressure alone.
- D. The restored signal connection's actual security.

33. A stated accessory-harness piece is 0.65 m long. Using 1000 mm per metre, what dimension results?

- A. 6.5 mm
- B. 650 mm
- C. 65 mm
- D. 6500 mm

34. A nonpyrotechnic restraint input reports the wrong buckle state. The physical mechanism operates, but its specified signal conductor is open and the approved input test fails. What warrants correction?

- A. Mechanical buckle replacement despite its operation check.
- B. Deployment-unit replacement solely from the wrong state.
- C. The buckle-state signal connection.
- D. Acceptance from visible latch movement alone.

35. A battery discharge complaint is accompanied by a relay that remains closed after its required release command. The load draw stops when its failed contact path is isolated under the prescribed test. What is indicated?

- A. A normal relay proven by the release command.
- B. A switched-path release fault contributing to drain.
- C. Battery replacement solely from the discharge symptom.
- D. Alternator replacement solely from parked current.

36. A stated pad-wear comparison starts at 12 mm and ends at 4.5 mm. What percentage of the initial thickness was used?

- A. 37.5%
- B. 75%
- C. 7.5%
- D. 62.5%

37. A high-current cable appears intact but its terminal fails the loaded-drop requirement and heats at that location. The source and load pass their comparisons. What merits correction?

- A. The demonstrated terminal contact condition.
- B. Load replacement despite its independent pass.
- C. Acceptance from cable appearance alone.
- D. Source replacement despite its accepted measurement.

38. A transmission sealing repair requires inspecting an affected mating surface. What should assembly follow?

- A. Only a cleared pressure-related message.
- B. Only matching the removed seal's dimensions.
- C. The prescribed surface disposition and complete sealing method.
- D. Only fitting a new seal against the unchecked surface.

39. A stated steering-ratio model compares 450 degrees at the steering wheel with 30 degrees at the road wheel. What ratio results?

- A. 30:1
- B. 420:1
- C. 1:15
- D. 15:1

40. A stated linear sensor model maps 0.5 V to 0 kPa and 4.5 V to 500 kPa. What pressure corresponds to 2.5 V?

- A. 312.5 kPa
- B. 250 kPa
- C. 125 kPa
- D. 500 kPa

41. After correcting a diesel EGR passage obstruction, what should the required test establish?

- A. Actual flow and affected engine response.
- B. Only valve movement.
- C. Only deletion of the former flow code.
- D. Only signal supply without an actual flow check.

42. An apparent engine temperature spike occurs only when a loose sensor terminal moves. Independent coolant temperature is steady and the connector fails inspection. What should diagnosis assess?

- A. The temperature-input connection.
- B. A real abrupt overheating event disproved by comparison.
- C. Acceptance from steady physical temperature alone.
- D. Cylinder-head replacement solely from the display.

43. A circuit interruption follows movement of a repaired connector. Its terminal backs out because the specified locking insert is absent, while the conductor itself passes inspection. What should be restored?

- A. Acceptance because the outer latch closes.
- B. The complete terminal-retention arrangement.
- C. Software replacement solely from movement sensitivity.
- D. Conductor replacement despite its accepted inspection.

44. A module receives its required supply but resets under load. Its ground contact loses the defined reference through corrosion, and the prescribed verified-ground comparison prevents the reset. What is supported?

- A. Acceptance from normal unloaded voltage alone.
- B. Supply replacement despite its accepted result.
- C. Module replacement solely from the reset.
- D. A ground-delivery fault at that connection.

45. A pressure trace is credible at the verified adapter, but a recorded scan value uses another pressure zone according to its definition. The two numbers are compared as if they measure one point. What must be corrected?

- A. The service criterion changed to match the mismatch.
- B. The trace tool as proven inaccurate.
- C. The physical source relationship of the compared values.
- D. The scan tool as proven unable to read any pressure.

46. An engine's mechanical sealing results pass, but an abnormal noise is reproduced at a damaged external accessory bearing under the approved test. What should be investigated?

- A. Engine dismantling solely from noise.
- B. The demonstrated accessory-bearing condition.
- C. Acceptance because internal engine checks pass.
- D. A cylinder sealing fault despite its accepted tests.

47. A replacement gasoline sensor must match the specified signal technology. What should final installation verify?

- A. Only connector-shell fit.
- B. Only the removed sensor's outer dimensions.
- C. Only whether any value appears on the tool.
- D. The correct application, supporting circuits, and affected response.

48. A stated load draws 4 A for 5 seconds, then 1 A for 15 seconds. What average current results over the full interval?

- A. 4 A
- B. 2.5 A
- C. 1.75 A
- D. 0.875 A

49. A brake-fluid handling task follows opening of the specified boundary. What should the work method preserve?

- A. The required containment, material protection, and exposure controls.
- B. Only a faster connection-opening sequence.
- C. Only the tool's clean appearance.
- D. Only the bench's nearest available tray.

50. A driveline vibration appears after support replacement. The new support's position conflicts with the approved detail and its assembled geometry fails the supplied measurement. What requires assessment?

- A. The actual support installation and shaft relationship.
- B. Acceptance because the mounting bolts fit.
- C. Acceptance because the support is newly supplied.
- D. Engine ignition repair solely from vibration.

51. A stated shaft test records 60 turns in 5 seconds, then 80 turns in another 5 seconds. What average rpm results over both stages?

- A. 720 rpm
- B. 140 rpm
- C. 840 rpm
- D. 960 rpm

52. A service procedure requires securing a suspended exhaust section before its final connection is released. What should be established?

- A. Only the remaining section's exterior appearance.
- B. Only loosening the connection gradually.
- C. Only the replacement's available mounting position.
- D. The specified independent support and removal path.

53. A heat-damaged high-current terminal is replaced. What should final repair verify?

- A. Only an intact external cover.
- B. Correct assembly and the loaded result.
- C. Only a no-load voltage reading.
- D. Only matching terminal dimensions.

54. A parking-brake return link is repaired after binding. What should the operating test demonstrate?

- A. Only the cabin control's movement.
- B. Both the required application and complete release functions.
- C. Only holding ability.
- D. Only the brake-warning indicator's state.

55. A stated delivery test collects 120 mL in 10 seconds, then 150 mL in 20 seconds. What average delivery rate in mL/min results over both stages?

- A. 600 mL/min
- B. 270 mL/min
- C. 540 mL/min
- D. 810 mL/min

56. A communication interface is configured for the correct vehicle after a format mismatch. What should verification establish?

- A. Required message compatibility and actual affected functions.
- B. Only the interface's outer dimensions.
- C. Only connector-latch operation.
- D. Only successful writing of the configuration file.

57. A rich-running condition begins after sensor replacement. Its signal responds according to a different specified sensor type from the vehicle's required unit, while the wiring tests comply. What should be reconciled?

- A. Acceptance because the connector physically fits.
- B. Fuel-pressure increase as proof of correct sensing.
- C. Harness replacement despite accepted checks.
- D. The installed sensor's actual application and control relationship.

58. An engine temperature-signal connection is restored after an intermittent fault. What should final verification reproduce?

- A. Only the connector's outside shape.
- B. Only a stationary engine-idle sound.
- C. Only clearing the temperature history.
- D. The relevant movement and accurate thermal-input response.

59. What is the relevant purpose of suitable wheel restraint during a stationary service task?

- A. Replace every required lifting support.
- B. Remove stored pressure from all hydraulic circuits.
- C. Control unintended vehicle rolling under the defined arrangement.
- D. Establish the hoist's capacity automatically.

60. A separated tailgate attachment is repaired. What should final testing establish?

- A. The specified retention and complete actuator-to-gate response.
- B. Only a cleared body-control history.
- C. Only actuator motion with the gate detached.
- D. Only the replacement's outer shape.

61. Why must the wheel-speed sensor's actual type be identified before testing?

- A. Every type has one universal resistance value.
- B. Its expected signals and supporting conditions depend on the design.
- C. Terminal count alone defines the complete test method.
- D. A physically rotating wheel proves every electrical signal valid.

62. A coupling attachment repair has a specified locking sequence. What should acceptance establish?

- A. Only one unloaded rotation.
- B. Completion of the actual sequence and final connection checks.
- C. Only the highest torque value reached.
- D. Only the component's readable identification.

63. In an ideal parallel arrangement between the same two nodes, what voltage relationship applies?

- A. The branch count alone determines source voltage.
- B. Each branch voltage equals its current numerically.
- C. Each branch shares the same node-to-node voltage.
- D. Voltage divides equally regardless of branch resistance.

64. An EV thermal-system pressure test is satisfactory, but the required pump-output check fails because its low-voltage signal connector is open. The pump works on its approved separate test. What should be restored?

- A. The installed pump-control path.
- B. Pump replacement despite its successful comparison.
- C. Acceptance from pressure integrity alone.
- D. Temperature-sensor replacement solely from pump inactivity.

65. A mechanical clutch-release member is replaced after a crack is confirmed. What should the repair restore?

- A. Only replacement dimensions without motion verification.
- B. Only actuator movement with the new member detached.
- C. Only the selector's displayed position.
- D. The specified position, retention, travel transfer, and final release function.

66. A stated accessory control is on for 0.2 second in a 0.5-second period. What duty percentage results?

- A. 60%
- B. 140%
- C. 2.5%
- D. 40%

67. A stated tyre-pressure reading is 0.24 MPa. Using 1000 kPa per MPa, what equivalent results?

- A. 24 kPa
- B. 2400 kPa
- C. 240 kPa
- D. 2.4 kPa

68. A diesel filter warning remains after the pressure sensing path passes its checks. The prescribed inspection finds filter substrate damage rather than only removable soot. What should be assessed?

- A. The actual filter damage and approved service disposition.
- B. Sensor replacement despite its accepted tests.
- C. Acceptance from resetting the loading value.
- D. Repeated regeneration as proof of repaired substrate.

69. A stated assembled stack needs 0.22 mm total clearance allowance; an existing approved contribution is 0.07 mm. What additional difference results?

- A. 0.29 mm
- B. 0.15 mm
- C. 0.07 mm
- D. 0.22 mm

70. An accessory works locally but not through the remote interface. Its receiving module is configured for a different command format, while physical communication remains active. What is supported?

- A. Acceptance from communication activity alone.
- B. Actuator replacement despite local operation.
- C. A complete physical bus opening despite traffic.
- D. A remote-command compatibility or configuration fault.

71. A qualified EV repair restores an interlock connection that prevented the defined operating state. What should final testing follow?

- A. The complete prescribed protection and affected system checks.
- B. Only fitting the outer cover visually.
- C. Only a cabin accessory's operation.
- D. Only clearing the interlock status.

72. An HVAC valve actuator moves as commanded, but its linkage is cracked and the actual valve position fails the required response check. What is supported?

- A. A sensor calibration change as proof of repaired linkage.
- B. A normal valve proven by the actuator's travel.
- C. A mechanical motion-transfer fault.
- D. An absent command disproved by actuator motion.

73. A remote body-accessory interface is configured to the actual vehicle. What should verification demonstrate?

- A. Only connector-shell engagement.
- B. The required command transfer and affected accessory operation.
- C. Only a successful file write.
- D. Only one interface diagnostic response.

74. A clutch-release complaint is being checked after the vehicle reaches a specified temperature. What should measurement preserve?

- A. Only the last repair's parts list.
- B. Only an unrelated transmission fluid reading.
- C. Only the cold pedal's apparent feel.
- D. The actual defined condition and relevant release-travel setup.

75. A suspension spring seat is restored after displacement. What should final verification include?

- A. Only the spring's part identity.
- B. Only height without checking the full travel.
- C. Required seating, height, and movement checks.
- D. Only one wheel's tyre pressure.

76. A hybrid drive function is withheld under its defined interlock condition. The approved check identifies an incompletely secured service connection, while the related supply criteria comply. What requires correction?

- A. Acceptance from adequate supply alone.
- B. The demonstrated interlock assembly and prescribed verification.
- C. Motor replacement solely from withheld drive.
- D. A charger replacement solely from the interlock status.

77. Why must suspension repairs preserve their specified movement clearances?

- A. The assembly must remain suitable throughout its required service motion.
- B. Clearance directly measures the brake fluid's condition.
- C. New parts eliminate every interference risk.
- D. A parked fit proves all future positions clear.

78. A transmission output input is used to calculate an actual ratio. What should the diagnosis compare?

- A. Only one shaft's speed without the other measurement.
- B. Only the requested gear value.
- C. Valid speeds at the defined operating state.
- D. Only the selector's requested state.

79. A message appears at the gateway input but not its required output after a software change. The actual loaded configuration excludes that destination route. What should be reconciled?

- A. The vehicle-specific message routing and applicable configuration.
- B. Sender replacement despite valid input traffic.
- C. Acceptance because the gateway is powered.
- D. Sensor replacement solely from destination absence.

80. A ground repair uses a defined body contact and protective treatment. What should be completed?

- A. Only the cable's printed size.
- B. The complete surface, retention, protection, and loaded verification method.
- C. Only a successful unrelated accessory test.
- D. Only tightening on an untreated nearby surface.

81. A module answers diagnostic requests but one required actuator status remains wrong. Its physical position input is disconnected and the approved test identifies that open local path. What should be restored?

- A. The entire bus replaced despite diagnostic responses.
- B. Acceptance from communication alone.
- C. Module replacement solely because one value is wrong.
- D. The status input connection.

82. A stated wheel target has 50 pulses/revolution, the measured rate is 1000 pulses/s, and rolling circumference is 2 m. What ideal speed results in m/s?

- A. 1000 m/s
- B. 100 m/s
- C. 20 m/s
- D. 40 m/s

83. A tailgate actuator completes its stroke but the gate does not follow because an attachment has separated. The control input and feedback from the actuator are valid. What should be restored?

- A. The actual actuator-to-gate mechanical connection.
- B. Sensor recalibration as proof of restored attachment.
- C. Controller replacement despite valid inputs.
- D. Acceptance from actuator stroke alone.

84. A displaced blower terminal is repaired after loss of feed. What should verification reproduce?

- A. Only the replacement terminal's label.
- B. Only a relaxed connector's continuity.
- C. The actual loaded supply and required blower functions.
- D. Only a cleared climate-control screen.

85. A bearing repair identifies a lubrication-path cause for the original damage. What should the approved work include?

- A. Only changing the warning indicator.
- B. Correct parts and the demonstrated oil-supply fault.
- C. Only fitting new bearings.
- D. Only recording the original noise location.

86. An engine knock is localized by the prescribed mechanical test. Inspection identifies a damaged main-bearing surface and clearance beyond its supplied limit, while accessory-drive checks comply. What is supported?

- A. Acceptance because the crankshaft still rotates.
- B. A fuel-filter fault proven by the bearing damage.
- C. A fault in the inspected crankshaft bearing arrangement.
- D. Accessory replacement despite its accepted comparisons.

87. A log has five timestamps: 0, 120, 250, 380, and 500 ms. What average interval between consecutive messages results?

- A. 500 ms
- B. 125 ms
- C. 100 ms
- D. 5 ms

88. A gasoline engine's spark test fails at one coil despite its correct supply and command. The prescribed independent coil test also fails, while that cylinder's fuel and compression comparisons comply. What is supported?

- A. A fault associated with the identified ignition coil.
- B. Compression repair despite its accepted result.
- C. Acceptance from correct coil input alone.
- D. Fuel-pump replacement despite accepted fuel evidence.

89. A stated geometric compression calculation has maximum cylinder volume 550 cm³ and minimum volume 50 cm³. What ratio results?

- A. 500:1
- B. 1:11
- C. 10:1
- D. 11:1

90. A wheel-speed sensor feed is restored after an open connection. What should service verify?

- A. Only unpowered conductor identity.
- B. Only a closed connector shell.
- C. The correct support condition and required operating signal.
- D. Only mechanical rotation without observing output.

91. A stated installed variation is 0.05 mm and its supplied maximum criterion 0.08 mm. What numerical difference below that maximum results?

- A. 0.015 mm
- B. 0.05 mm
- C. 0.13 mm
- D. 0.03 mm

92. A load is inactive because its control relay output stays absent. Feed and coil command comply, while the relay's specified switching check fails. What should be assessed?

- A. The load replaced before restoring its supply.
- B. The relay's actual contact function.
- C. The valid command source replaced solely from inactivity.
- D. The verified feed treated as absent.

93. An electrical repair restores loaded voltage, but its required heat shield is omitted near the conductor and the final thermal-clearance inspection fails. What remains necessary?

- A. The specified protective installation and affected verification.
- B. Acceptance from a powered display alone.
- C. Acceptance from new wire material alone.
- D. Acceptance from voltage alone.

94. A communication branch works before panel installation, but a fastener then damages its conductor and the prescribed test identifies an open path. What should be corrected?

- A. Sender replacement solely from postassembly absence.
- B. Acceptance from the earlier temporary scan.
- C. Gateway coding as proof that the open wire is repaired.
- D. The branch's actual installation and conductor damage.

95. A suspension height complaint occurs after spring installation. The part identity is correct, but its seat is displaced and the prescribed assembled-height check fails. What warrants correction?

- A. Acceptance because the spring is new.
- B. The spring's actual seating and installed geometry.
- C. Damper replacement solely from the height complaint.
- D. Acceptance from the correct part number alone.

96. A repaired spring arrangement meets its height criterion but still contacts an identified component within the required movement range. What remains deficient?

- A. Acceptance from a cleared height message alone.
- B. Acceptance from parked height alone.
- C. The final service-motion clearance.
- D. Acceptance from the correct spring identity alone.

97. A wheel-bearing test identifies actual roughness with the prescribed assembled retention correct. A nearby joint and the tested brake release meet their requirements. What is supported?

- A. The bearing's deficient mechanical condition.
- B. Acceptance from the nearby joint's condition alone.
- C. Brake-pressure repair despite accepted release.
- D. Retention adjustment solely from roughness despite its correct result.

98. An EV's monitored temperature is implausible after service. The qualified diagnostic comparison confirms normal physical temperature but finds the reporting connector assigned to the wrong input. What should be reconciled?

- A. The actual temperature-input connection and verification.
- B. Battery replacement solely from the displayed value.
- C. Cooling adjustment solely to match the incorrect report.
- D. Acceptance from a normal physical measurement alone.

99. In a system designed with a refrigerant drier, what is its relevant service function?

- A. Provide the blower's electrical current directly.
- B. Drive the compressor shaft mechanically.
- C. Set the cabin outlet door's position.
- D. Help manage moisture in the specified refrigerant path.

100. A gasoline delivery repair addresses a pump that failed its defined flow test. What should final verification include?

- A. Only audible pump rotation.
- B. Only pump speed without measuring its flow.
- C. Required delivery, integrity, and loaded operation.
- D. Only the engine's ability to idle.

101. What is an ignition coil's relevant role in a spark-ignition system?

- A. Provide the spark plug's physical electrode gap.
- B. Develop the voltage needed for the defined spark event.
- C. Report crankshaft position as the rotation sensor.
- D. Select every ignition event independently of control input.

102. A tyre-pressure input reports one value that changes with a damaged sensor connection, while a verified gauge remains steady during the prescribed comparison. What should be assessed?

- A. Inflation adjusted solely to match the unstable display.
- B. A real rapidly changing pressure disproved by the gauge.
- C. The actual pressure-sensing path.
- D. Acceptance because another tyre's report is plausible.

103. A stated constant service load is 4 kW for 0.25 hour. What input energy results?

- A. 0.0625 kWh
- B. 1 kWh
- C. 16 kWh
- D. 4.25 kWh

104. A defined refrigerant-transfer calculation records a container decreasing from 8.75 kg to 8.25 kg, with the difference fully transferred. What mass in grams results?

- A. 500 g
- B. 0.5 g
- C. 17000 g
- D. 8750 g

105. A transmission output signal is absent at the controller but valid at the sensor. The prescribed end-to-end test finds the conductor open across a damaged splice. What should be corrected?

- A. Internal gear replacement solely from absent reported speed.
- B. Acceptance because the shaft physically rotates.
- C. Sensor replacement despite its valid local output.
- D. The demonstrated speed-signal route.

106. A cabin blower is commanded but receives no switched feed through a connector whose terminal is displaced. The motor passes the specified separate test. What should be restored?

- A. Acceptance from a correct command alone.
- B. The demonstrated blower output connection.
- C. Refrigerant addition solely from absent airflow.
- D. Motor replacement solely from inactivity.

107. What is a crankshaft main bearing's relevant mechanical role?

- A. Support the crankshaft at its defined rotating journal relationship.
- B. Operate the intake valve through every cam lobe directly.
- C. Meter fuel through the injector rail directly.
- D. Schedule ignition-coil commands directly.

108. Why does a clutch repair inspect the required flywheel contact surface?

- A. A new clutch disc proves every mating surface sound.
- B. Its outside diameter establishes lubricant quality.
- C. Its appearance replaces the required tightening method.
- D. Its actual condition contributes to the friction assembly's operation.

109. A power accessory receives its command but stops at a mechanically obstructed rail. The motor's independent test and installed electrical checks comply. What should be assessed?

- A. Motor replacement despite its successful comparison.
- B. Controller replacement solely from stopped travel.
- C. The actual mechanism's obstruction and required movement.
- D. Acceptance because supply voltage is correct.

110. Why should an EV repair record identify the actual verified work boundary?

- A. The result applies to the defined components and test points.
- B. Any one verified point proves every vehicle conductor safe.
- C. A low-voltage accessory result defines every high-voltage source.
- D. A recorded warning code replaces the measurement method.

111. A technician records an intermittent reading during a defined test. What should documentation include?

- A. Only the time the work order was opened.
- B. Only the replacement considered before testing.
- C. The setup, operating state, and observed change pattern.
- D. Only the highest number without its condition.

112. A diesel loses boost under load. Actuator response and sensor plausibility comply, but an approved pressure test identifies leakage at a damaged charge-air cooler boundary. What is supported?

- A. Acceptance because requested boost remains correct.
- B. A charge-air containment fault at that boundary.
- C. Sensor replacement despite its comparison.
- D. Actuator replacement despite its accepted movement.

113. A wheel-speed sensor's applicable support voltage is absent through a confirmed local feed opening. Its approved independent sensor check complies and the target condition meets inspection. What should be restored?

- A. Sensor replacement despite its comparison.
- B. Target replacement despite its accepted inspection.
- C. Acceptance from mechanical wheel rotation alone.
- D. The sensor's demonstrated supporting feed.

114. A cracked HVAC valve linkage is replaced. What should assembly preserve?

- A. Only the control display's requested value.
- B. Only the replacement's external resemblance.
- C. The specified mechanical reference, retention, and complete response checks.
- D. Only actuator rotation with the link removed.

115. A brake disc has suitable thickness, but the final installed plane fails the stated variation criterion because the mounting face is damaged. What should be assessed?

- A. The actual seating geometry and affected assembly.
- B. Pad replacement as proof of repaired mounting damage.
- C. Acceptance from thickness alone.
- D. A tyre-pressure adjustment as proof of corrected plane variation.

116. A steering input is correct but actual assist is deficient. The required motor drive path loses voltage through a damaged terminal under load, while the motor passes its independent test. What is supported?

- A. Acceptance from correct command alone.
- B. Input-sensor replacement despite its accepted comparison.
- C. Motor replacement solely from weak assist.
- D. A steering drive-connection fault.

117. After relocating an incorrectly installed shaft support, what should final service verify?

- A. Only the fasteners' initial fit.
- B. Installed geometry, retention, and operating checks.
- C. Only cold location without the movement test.
- D. Only whether the old vibration changes at idle.

118. A diesel EGR flow complaint persists with a valve that passes its commanded movement test. The required passage inspection identifies an actual obstruction and the sensing comparison complies. What should be addressed?

- A. Acceptance because the valve moves.
- B. Valve replacement solely from the flow code.
- C. The demonstrated recirculation-passage restriction.
- D. Sensor replacement despite its accepted comparison.

119. A stated perpendicular torque comparison uses $T = F \text{ times } r$, torque 36 N m, and radius 0.45 m. What force results?

- A. 80 N
- B. 16.2 N
- C. 160 N
- D. 36.45 N

120. An interface passes its own communication test but uses the wrong message format for the receiving system, which rejects its updates. Both physical segments otherwise communicate. What should be assessed?

- A. Replacement of the physically active segments.
- B. Acceptance from the interface's self-test alone.
- C. A missing power supply disproved by operation.
- D. The interface's message compatibility and configuration.

121. A repaired interface delivers its messages, but the required equipment configuration still identifies another vehicle variant and one affected function fails. What remains outstanding?

- A. Acceptance from matching connector size alone.
- B. Acceptance from message delivery alone.
- C. Acceptance from an interface self-test alone.
- D. The correct final configuration and functional verification.

122. A vehicle's support setup is adequate for inspection, but the planned next operation removes a component that provides one of the current support contacts. What must be reconciled?

- A. Acceptance from the component's replacement part number alone.
- B. The required support arrangement before that contact is removed.
- C. Acceptance from the lifting equipment's label alone.
- D. Acceptance from the initial inspection stability alone.

123. A module resets only when its load turns on. Its loaded supply falls below the provided criterion at a corroded local connection, while peer communication remains intact. What is supported?

- A. Acceptance from the unloaded voltage alone.
- B. A universal bus interruption disproved by peers.
- C. A local operating-supply fault.
- D. Software replacement solely from reset.

124. In a stated basic friction model, what does the coefficient of friction compare?

- A. Fluid pressure relative to pad temperature.
- B. Friction force relative to normal contact force.
- C. Rotor diameter relative to piston travel.
- D. Normal force relative to fluid volume.

125. A relay is serviced after failing to release a parked load. What should verification include?

- A. Required application, release, and shutdown checks.
- B. Only the normal powered-load state without release.
- C. Only audible relay motion without a contact test.
- D. Only one successful powered-load test.

Practice Exam 10: Answer Key and Explanations

1. B — Apply the supplied relation: 12 times 100 divided by the sum 300 gives 4 V. The defined ideal model omits other loads and connection losses. It is not a universal automotive sensor voltage and must not replace the actual vehicle's circuit diagram or service criterion.

2. B — The input describes the relevant shaft's rotation through its sensor and signal arrangement. A requested gear and actual speed are different quantities. Use the actual source and service checks rather than treating output data as a direct measurement of every hydraulic or friction condition within the transmission.

3. C — The repaired assembly needs correct mechanical seating and electrical relationships as well as a suitable coil. Complete its required checks and verify the original ignition condition. A quick start and cleared history cannot establish reliable output or secure connection under the relevant engine load.

4. D — The low pressure and inspected sealing defect provide corroborating application evidence under the failing condition. Correct and verify through the applicable transmission method. A control request cannot establish delivery of required pressure across a leaking internal boundary or prove that a speed sensor caused it.

5. A — Divide the supplied useful output by input and multiply by 100: 12 divided by 15 gives 80 percent. The values define this test basis, not a universal motor or vehicle efficiency. The remaining difference is not itself a diagnosis without the actual operating conditions and applicable criterion.

6. A — The drive now operates while the measured position still lacks a reliable mounting relationship. Correct and verify the sensing path under its actual procedure. Mechanical motion and command delivery cannot establish accurate feedback from a sensor that remains outside its required installed condition.

7. B — The fault appears at a specific securing connection under the relevant load. Restore and verify its retention before another disposition. Smooth unpowered rotation and sound bearings establish other properties, not security of an attachment that moves outside its stated criterion.

- 8. C** — The adapter must suit the actual sensor or pressure boundary and test method, not merely engage mechanically. Match its complete specification and verify the setup. Thread size and reach cannot establish sealing, range, or electrical compatibility under the required diagnostic condition.
- 9. D** — The shared reference failure explains the group of implausible inputs, and the controlled correction restores their information. Complete the proper branch repair and verify affected functions. Simultaneous displayed faults do not automatically represent several separate sensor failures when one common electrical condition is demonstrated.
- 10. B** — Calculate area as 3.14 times 50 squared divided by four, giving 1962.5 mm². Multiply by the supplied 2 N/mm² pressure for 3925 N. The result uses the defined ideal model and does not include unprovided friction losses or certify complete vehicle braking performance.
- 11. C** — The noise result verifies one function while the final connection still fails its securing requirement. Correct and verify that retention before acceptance. A quiet replacement cannot establish suitable fastening, and unrelated measurements do not complete the repaired accessory's actual mechanical assembly.
- 12. D** — The lock must retain contact through the movement that exposed the failure. Verify the installed relationship under the applicable electrical test. A relaxed conductive result and image do not demonstrate security of the completed connection in another required service position.
- 13. A** — The pump delivers fuel under one test while its connection remains demonstrably unreliable through the required movement. Restore retention and verify loaded operation. Correct terminal count and component identity cannot establish secure current delivery in a connector that still interrupts the supply.
- 14. D** — The installed control must now operate the pump and produce the required thermal behaviour under the actual procedure. A separate pump pass establishes capability but not its final command route. Complete the affected checks rather than accepting solely from a latched housing or cleared record.
- 15. C** — Multiply the stated voltage by charge quantity: 12 V times 4 Ah equals 48 Wh under the constant-voltage model. Ampere-hours and watt-hours are different quantities. This arithmetic does not independently establish actual usable battery energy or a charging procedure without the relevant component and operating information.
- 16. A** — The tool can request an action when the vehicle and test support it. Actual electrical and mechanical response must still be verified under the required conditions. The request does not automatically prove function or authorize software changes outside a specified programming procedure.
- 17. B** — The repair must remain intact in the physical condition that caused the failure. Restore protection and verify the fully installed route. A test without the panel does not demonstrate clearance from its fasteners, and colour cannot establish conductor integrity through that exposure.
- 18. D** — The input request, actual mechanism, and reported position can differ when a drive, linkage, or sensing path fails. Compare them using the applicable procedure. One successful stage cannot certify the others, so the observations together help locate the part of the chain requiring correction.

- 19. C** — The final assembly imposes a known mechanical demand outside its support requirements despite the earlier integrity pass. Restore and verify the required arrangement through movement. Initial tightness cannot establish durable installation of a connection still exposed to the identified pulling force.
- 20. B** — Physical damage requires its specified corrective disposition and investigation of relevant contributing conditions. A reset records a service state but cannot repair a substrate. Complete the actual component and system checks rather than assuming heat or external cleaning establishes acceptable internal filter condition.
- 21. A** — A module can communicate while one function remains incorrect, or be absent because a supporting path fails. Test the relevant attributes separately using the actual system design. One response or supply value cannot establish every message route and mechanism controlled by the module.
- 22. C** — The geometry result does not establish complete securing of the installed assembly. Restore the required retainer and verification under the vehicle method. A smooth rotation and suitable measurements can coexist with an incomplete load-bearing connection that still fails its prescribed assembly requirement.
- 23. A** — The released hydraulic result narrows the cause, while the wheel-end linkage directly fails its release condition. Correct and verify the parking mechanism. Movement at the cabin operator does not establish complete mechanical return through the actual connected path to each wheel.
- 24. D** — The actuator delivers its required input while the damaged member interrupts mechanical transfer. Correct and verify that release path under the procedure. Travel at one point does not establish the motion of the final clutch element when an intervening component is cracked.
- 25. B** — The independent flow result identifies a delivery deficiency after the required supporting conditions are established. Assess the pump and relevant mechanical supply path through its procedure. Audible rotation is not a flow measurement, and accepted electrical tests do not make deficient fuel delivery acceptable.
- 26. D** — The physical pressure is suitable, but the input does not represent it despite its supporting circuits passing. Diagnose the sensor response and signal path under the applicable method. A correct actual condition does not make inaccurate control information acceptable or justify changing refrigerant quantity to match it.
- 27. C** — The corrected setup supplies the stable verified measurement basis missing from the original readings. Use and record that result under the actual procedure. Averaging compromised observations cannot restore their reference or justify selecting a preferred number instead of the valid component measurement.
- 28. B** — The sensor cannot follow actual movement through the detached link. Restore and verify the required physical-to-signal relationship using the brake-control method. Normal mechanical travel does not validate its electronic report, and changing fluid cannot reconnect the identified sensing linkage.

- 29. A** — The repair must restore the supporting condition and the actual information relationships affected by it. A responding module is not proof that every relevant input or message is correct. Verify the identified group under the applicable procedure and record the final operating results.
- 30. C** — The value represents charge state according to its system model rather than certifying every aspect of battery condition. Isolation and mechanical output are separate measurements. Interpret the estimate with actual operating information and the relevant vehicle procedure rather than treating one percentage as universal component acceptance.
- 31. A** — The surface and securing method establish separate aspects of the installed wheel-end geometry and load path. Restore and verify both as specified. One dimensional result cannot validate retention, and external newness does not establish the actual contact condition beneath the assembled parts.
- 32. D** — The hydraulic work meets one requirement while the signal connector demonstrably fails another. Restore and verify it through the relevant movement. A pressure pass cannot establish control information or electrical retention, and a stationary response does not represent the failed movement condition.
- 33. B** — Multiply 0.65 m by the supplied 1000 millimetres per metre to obtain 650 mm. This is the same length in another unit. The conversion does not establish a suitable installed route or authorize changing a vehicle-specific harness dimension without its applicable repair requirements.
- 34. C** — The actual mechanism works while its input path cannot report the required state. Repair and verify through the manufacturer's approved restraint method. Physical latching does not establish electrical reporting, and the observation cannot by itself prove a deployment-unit failure.
- 35. B** — The commanded release does not open the actual contact path, and its controlled isolation stops the unwanted draw. Repair and verify that circuit under the appropriate method. The symptom may require battery assessment, but these results identify a cause separate from assuming failed storage or generation.
- 36. D** — The used thickness is 12 minus 4.5, or 7.5 mm. Divide by the initial 12 mm and multiply by 100 for 62.5 percent. This defined wear fraction does not supply a universal replacement threshold or represent every remaining material layer without the actual pad specification.
- 37. A** — The localized heat and measured loss provide direct evidence of a current-carrying connection fault despite an intact exterior. Restore and verify the terminal under the actual load. Appearance cannot quantify contact resistance, and accepted endpoint comparisons reduce support for replacing the source or load.
- 38. C** — The replacement seal depends on the surface against which it operates. Complete the required inspection or corrective disposition before assembly and verification. Matching dimensions cannot make an unchecked damaged interface suitable, and a cleared message does not establish actual pressure retention of the repaired boundary.

- 39. D** — Divide steering-wheel angle by road-wheel angle as the defined model requires: 450 divided by 30 equals 15:1. The result applies to the stated comparison. It does not claim every steering mechanism has one constant ratio over its full operating range.
- 40. B** — The reading lies 2 V above the 0.5 V lower endpoint, halfway through the full 4 V span. Half of 500 kPa is 250 kPa. The question supplies this model; another sensor's type, pressure reference, or transfer curve cannot be assumed identical.
- 41. A** — The repair restores a fluid path that must now demonstrate the prescribed operating result. Valve travel alone does not measure recirculation through the passage. Verify the actual flow indicators and affected performance rather than accepting from component identity or cleared diagnostic history.
- 42. A** — The independent measurement and movement-sensitive input separate actual temperature from its faulty reporting path. Correct and verify the connector before treating the display as a physical engine event. Normal coolant temperature does not validate an inaccurate control input or establish its reliable operation.
- 43. B** — The missing insert prevents the required internal retention and the terminal movement interrupts actual contact. Correct and verify that assembly through its service range. A closed outer latch does not establish the terminal's security, and the fault cannot be repaired by an unrelated software change.
- 44. D** — The controlled comparison removes the reset when a suitable reference is provided, corroborating the corroded connection's loaded fault. Correct and verify its permanent arrangement. A supply reading does not establish the complete circuit, and normal low-demand voltage cannot validate a return path that fails under current.
- 45. C** — The two values describe different identified locations, so disagreement does not by itself prove an instrument or vehicle fault. Establish the intended comparison and applicable pressure relationship. Accurate measurements cannot be treated as equivalent when their defined physical sources are not the same test point.
- 46. B** — The evidence locates the reproduced sound at an external bearing while the specified internal comparisons are suitable. Assess that component and its drive under the service method. A passing engine seal test cannot establish acceptable condition of a separate noisy accessory assembly.
- 47. D** — The signal strategy must match the actual control system, not simply produce an available number. Verify component applicability and installed response with suitable support conditions. Connector fit and outer size cannot demonstrate equivalence of another sensor technology to the required input.
- 48. C** — The current-time contributions are 20 and 15 ampere-seconds, totaling 35 over 20 seconds. Divide for 1.75 A average. The unequal durations require weighting; simply averaging 4 A and 1 A would not represent the actual combined record.
- 49. A** — The fluid release must remain controlled using suitable equipment and the procedure's protection requirements. A nearby tray is not automatically compatible or sufficient for the actual task.

Speed and a clean tool cannot establish safe containment or protect affected surfaces from the identified fluid exposure.

50. A — The inspection and measurement identify a specific installed geometry fault associated with the recent change. Reconcile it and verify the relevant operation. A new component can be positioned incorrectly, and bolt fit cannot establish the support's required location or shaft alignment.

51. C — The shaft completes 140 turns in ten seconds, or 14 turns per second. Multiply by 60 for 840 rpm average. This average describes the combined record rather than certifying that the shaft stayed at one constant speed throughout both intervals.

52. D — The final connection currently carries a defined load that must transfer to an appropriate support before release. Establish the prescribed method and clear path. Gradual loosening does not independently secure the assembly, and a new part's location cannot support the section being removed.

53. B — The replacement must form a suitable contact and retain it under the required current and installed conditions. Verify the actual loaded result as well as assembly. A protective cover and matching dimensions are not measurements of the contact's remaining loss in operation.

54. B — The repaired mechanism must apply and release through its complete installed path. Holding alone does not establish freedom from drag after release. Verify the defined wheel-end response as well as the control relationship rather than relying on a lamp or motion at another point.

55. C — The total collection is 270 mL over 30 seconds. Divide volume by time and multiply by 60 for 540 mL/min average. Averaging the two stage rates without weighting their unequal durations would not give the combined test's actual volume-per-time result.

56. A — Configuration transfer is a service step rather than the complete operating result. Verify that the required receiver accepts the current messages and that associated functions respond. Mechanical fit and a successfully written file cannot establish the final information relationship in the installed vehicle.

57. D — The response and confirmed application mismatch identify an unsuitable sensing relationship despite sound supporting wiring. Correct the selection and verify the actual system. Mechanical connector fit cannot establish equivalent signal strategy or make a different sensor type appropriate for the vehicle's control requirements.

58. D — The original fault depended on movement at the input connection. Verify the repaired path under that condition and compare it with actual temperature as specified. A cleared record and an idle sound do not establish accurate or reliable sensor information in the installed circuit.

59. C — Wheel restraint controls a particular movement hazard and must suit the actual work arrangement. It does not carry a lifted vehicle or depressurize other systems. Identify the separate sources and support requirements instead of treating one control as proof that the complete task is secured.

60. A — The repaired connection must remain secured and transmit the actual drive movement to the gate. Verify the complete prescribed sequence. An unloaded actuator pass and new-looking component

cannot establish the final mechanical relationship or required gate function after the attachment is restored.

61. B — Different sensor designs require their applicable test principles and support conditions. Identify the actual type and procedure before interpreting a measurement. Mechanical rotation and appearance cannot establish electrical response, and one assumed resistance limit cannot represent every active or passive sensor arrangement.

62. B — The required sequence defines the complete securing arrangement rather than one numerical setting. Verify its actual stages and final assembly under the procedure. Identification and free rotation are not substitutes for the retention function of the connection that failed under load.

63. C — The branches connect to the same defined points, so they share that potential difference under the stated model. Current can differ with their loads. Do not confuse parallel voltage with the divided drops along a series path or treat branch count as the source's voltage setting.

64. A — The circuit is tight and the pump can operate, but the installed command path is incomplete. Restore and verify it under the actual trained-service method. Pressure integrity establishes containment, not current delivery or circulation, and the specific signal opening does not demonstrate sensor failure.

65. D — The new member must transmit the actuator's motion correctly in the completed assembly. Verify its seating and retention as well as actual release. Detached actuator movement and selector indication do not establish the mechanical relationship of the replaced component under the required installed condition.

66. D — Divide the supplied on-time by complete period and multiply by 100: 0.2 divided by 0.5 times 100 equals 40 percent. The calculation describes this defined waveform. It is not automatically the accessory's mechanical speed or a universal control setting for another vehicle function.

67. C — Multiply the supplied 0.24 MPa by 1000 to obtain 240 kPa. This expresses the same reading in another pressure unit. It is not a recommended inflation value without the actual vehicle and tyre requirement, and it does not change the original pressure-reference basis.

68. A — The inspection identifies a physical condition that cannot be assumed corrected by oxidizing soot or resetting a model. Follow the filter's required disposition and contributing-cause diagnosis. Accurate pressure sensing does not establish sound substrate, and a changed displayed estimate cannot restore damaged material.

69. B — Subtract the supplied existing contribution from the target: 0.22 minus 0.07 equals 0.15 mm. The actual adjustment method and component selection still follow the assembly procedure. This arithmetic describes the defined difference rather than a universal shim or preload instruction for every transmission.

70. D — The local path works and the remote message format does not meet the receiver's requirement. Reconcile configuration and verify the intended command transfer. Traffic presence does not establish that its content is interpreted correctly or prove a fault in the functioning local actuator.

- 71. A** — The repaired connection must meet its actual protective assembly and functional requirements before return to service. Complete the vehicle's trained procedure and relevant verification. Status clearing and ordinary accessory operation do not establish the restored interlock boundary or its required response in the delivered system.
- 72. C** — The actuator input reaches the assembly while the cracked link cannot transmit its movement correctly. Correct and verify the actual valve response. Travel at one component does not establish the next component's position, and calibration cannot physically restore the identified mechanical connection.
- 73. B** — The updated settings must produce the intended end-to-end behaviour, not just be stored in a module. Verify the required remote command and actual response. File transfer and diagnostic participation establish separate steps rather than acceptance of the completed accessory-control relationship.
- 74. D** — The complaint and service comparison depend on the stated temperature and release relationship. Record and verify those conditions during the test. An earlier cold observation cannot establish hot travel, while a parts list does not measure the completed mechanism's actual response.
- 75. C** — The repair must establish the actual installed spring relationship and safe movement under its procedure. Identity is necessary but does not prove seating. Verify the specified geometry and assembly rather than using a general impression or an unrelated pressure value as evidence of completion.
- 76. B** — The required boundary condition is not established by the incompletely secured connection, providing a specific reason to follow the qualified corrective procedure. Supply alone does not demonstrate restored interlock function. Withheld operation cannot identify a motor or charging defect without its relevant supporting evidence.
- 77. A** — The suspension moves through a defined range, and its components must avoid unintended contact in those actual positions. Parked fit and new condition do not establish the complete envelope. Verify the final arrangement according to the vehicle's applicable supports, routing, and movement requirements.
- 78. C** — The calculation must use credible speeds under the condition to which the expected ratio applies. A requested gear does not establish actual engagement. Identify the relevant sources and verify the setup before assigning a numerical mismatch to internal transmission slip or a sensing defect.
- 79. A** — The message reaches the gateway, and the excluded route identifies why it is not forwarded to the required side. Correct applicability and verify the complete transfer. Gateway power and source traffic are necessary observations but do not establish output routing under an incorrect installed configuration.
- 80. B** — The procedure establishes both electrical contact and its preserved condition in the actual exposure. Follow the specified attachment and protective method and verify the repaired path. Another accessory and nominal conductor size cannot establish suitability of the actual ground interface.

- 81. D** — The module's network participation is established, while its identified physical input cannot supply the required status. Restore and verify that local path. A diagnostic response does not certify accuracy of every parameter, and one bad input does not demonstrate failure of the complete bus.
- 82. D** — Divide pulse rate by pulses per turn to obtain 20 revolutions per second. Multiply by the supplied 2 m circumference for 40 m/s. Both conversion stages are required, and the result assumes the stated rotation and rolling model rather than adding unprovided slip or radius changes.
- 83. A** — The drive reaches its defined motion but the separated attachment prevents transfer to the gate. Restore and verify the complete mechanism. Valid actuator feedback represents that component, not necessarily the connected gate, and software adjustment cannot repair the demonstrated physical separation.
- 84. C** — The connection must carry the operating load and remain secured in its installed condition. Verify the required blower response using the applicable test. A relaxed continuity indication does not establish current delivery or retention through the position that originally displaced the terminal.
- 85. B** — The replacement must not be exposed to the same demonstrated supply problem that damaged the original assembly. Follow the component checks and lubrication correction as specified. A new bearing and an altered display cannot establish an adequate operating oil path or verified final clearance.
- 86. C** — The localized mechanical evidence and failed clearance identify a relevant internal condition rather than relying on noise alone. Assess the bearing and associated shaft and lubrication cause through the procedure. Continued rotation does not make a damaged, out-of-range bearing suitable for normal operation.
- 87. B** — Five timestamps contain four consecutive intervals. Their total span is 500 ms, so divide by four for a 125 ms average. Individual intervals vary, and the average does not replace a criterion that checks each update. Counting messages directly as intervals would produce another value.
- 88. A** — The coil has the required inputs but fails both the relevant output and independent comparisons. That corroborates a component-related ignition fault rather than relying on the misfire label alone. Correct supply and command cannot establish an adequate spark event from a load that fails its tests.
- 89. D** — Divide the supplied maximum volume by minimum volume: 550 divided by 50 equals 11:1. The maximum value is already the complete volume at that piston position, so do not subtract the minimum before forming this defined ratio. The result is geometric rather than a cranking-pressure value.
- 90. C** — The repaired sensor must receive its required electrical conditions and produce valid information during the prescribed operation. A shell and rotating target do not establish its output. Complete the actual type-specific signal check rather than treating any sensor installation as the same test.
- 91. D** — Subtract the measured 0.05 mm from the supplied 0.08 mm maximum to obtain 0.03 mm difference. This addresses the stated comparison only. The complete repair must also meet its other

prescribed geometry, retention, and functional requirements rather than acceptance being inferred from one margin alone.

92. B — The required inputs reach the relay but its contact test fails to deliver the output. Correct and verify that switched path before condemning a load that lacks power. A command and feed are supporting observations rather than proof of complete relay operation.

93. A — The electrical result is compliant while the conductor remains exposed outside its required protection arrangement. Restore the shield and verify clearances under the actual service conditions. Present operation cannot establish that the final route is protected from the demonstrated nearby thermal source.

94. D — The final assembly changes the physical path and creates a measured interruption that was absent before the panel was fitted. Repair protection and routing and verify installed communication. A prior temporary pass cannot establish the condition after a fastener damages the actual conductor.

95. B — The new component does not establish correct installation when its seat is displaced and final geometry is deficient. Restore the applicable assembly and assess affected parts. The height symptom alone could have multiple causes, but the inspection provides specific evidence at the repaired spring arrangement.

96. C — The parked geometry passes while the assembly still fails a separate movement requirement. Correct the interference through the approved arrangement and verify the full applicable range. Suitable height and component identity cannot establish clearance at the position where actual contact is demonstrated.

97. A — The bearing remains mechanically rough under the correct assembly state after relevant adjacent comparisons pass. Assess and disposition it through the required method. Sound nearby parts narrow the investigation but do not establish acceptability of the affected bearing itself.

98. A — The independent result separates actual thermal state from the signal routed to the wrong controller input. Restore and verify the applicable connection through the vehicle method. A normal physical condition does not validate inaccurate control information, and the display alone cannot establish battery damage.

99. D — The drier contributes to the internal refrigerant condition through its applicable design and material. Its role is separate from mechanical compression and cabin airflow control. Correct system servicing must also follow the complete recovery, preparation, and verification requirements rather than treating one replaced component as every service step.

100. C — The replacement must demonstrate the actual delivery and sealed operating arrangement required by the vehicle. Rotation and identity supply limited observations rather than the acceptance measurements. Idle may not reproduce the demand that exposed the original deficient flow, so verify the relevant conditions.

101. B — The coil develops the required electrical output under the system's operating design. Position sensing, event scheduling, and electrode geometry are separate relationships. Correct supply or a coil label alone does not establish that its output performs properly under the actual ignition load.

102. C — The independent pressure remains stable while the reporting path reacts to a specific connection condition. Diagnose that input and applicable installation. A plausible value elsewhere cannot establish this sensor's reliability, and changing inflation would not correct the identified movement-dependent reporting fault.

103. B — Multiply the supplied power by elapsed time: 4 times 0.25 equals 1 kWh. The constant-rate condition defines this energy calculation. It does not establish a battery's remaining charge, health, or actual circuit acceptance without additional vehicle data and the applicable qualified-service test method.

104. A — The defined mass difference is 0.50 kg. Multiply by 1000 grams per kilogram for 500 g transferred under the stated assumption. This record does not independently specify the vehicle's final charge; actual charging must account for its prescribed preparation and delivery method.

105. D — The sender produces a signal, but the open splice prevents it reaching the controller. Restore and verify that route before interpreting missing data as mechanical failure. Actual rotation alone cannot establish electrical reporting through an interrupted conductor, and a suitable local output does not validate the whole path.

106. B — The motor has demonstrated capability but its installed feed path is interrupted at a specific terminal. Restore and verify that connection. A command cannot establish current through an open output, and absent airflow cannot prove the refrigerant circuit needs a charge change.

107. A — The bearing supports the crankshaft within its specified lubricated fit and load path. Its geometry and condition must meet the engine's actual requirements. Ignition scheduling, fuel delivery, and valve actuation belong to other components and cannot be inferred from a bearing's presence or identity.

108. D — The friction assembly works against its actual mating surface, which must meet the specified condition and dimensions. A new disc does not establish suitability of an existing damaged interface. Surface preparation and inspection accompany, rather than replace, the complete retention and assembly requirements.

109. C — The electrical chain is suitable while the installed mechanical path prevents movement. Correct and verify that obstruction under the service method. A motor can be functional on a separate setup yet unable to move an obstructed load, so supply and command cannot establish the complete accessory response.

110. A — The boundary links the verification to the actual sources and components covered by the prescribed procedure. It cannot be extended automatically to every other conductor or stored-energy volume. Qualified personnel use the defined points and equipment checks rather than treating an unrelated status as universal electrical safety evidence.

- 111. C** — The changing result must be related to the physical and operating conditions that produced it. Record its pattern and setup so the diagnostic comparison is reproducible. A peak without context cannot distinguish a real component change from a test connection or state variation.
- 112. B** — The pressure test locates a physical loss in the air path after supporting control and sensing checks pass. Repair and verify the cooler boundary using the applicable method. Requested boost is a target, not evidence that the damaged route retains and delivers the required actual pressure.
- 113. D** — The sensor and target meet their defined checks, but the installed type cannot provide its required function without the specified support. Restore and verify the feed under the applicable method. A rotating wheel does not establish an adequate electrical condition at that sensor.
- 114. C** — The new linkage must establish the actual valve relationship and transmit motion securely over its prescribed range. Verify the final response, not merely actuator rotation. A request and similar shape cannot demonstrate correct installed reference or operation of the repaired valve assembly.
- 115. A** — Thickness and installed geometric variation are separate measured attributes. Assess the damaged mounting interface and verify the repaired assembly. A suitable thickness cannot make an out-of-range operating plane acceptable, and changes to pads or tyre pressure do not restore the demonstrated supporting surface.
- 116. D** — The tested motor can operate while the installed connection cannot deliver its required electrical condition. Correct and verify that terminal and actual assist response. A valid input is not proof of motor power through a path that fails under the relevant demand.
- 117. B** — The correction must achieve the prescribed shaft relationship and secure it in the final installed condition. Complete the measurements and relevant operating test. A product label and an idle observation cannot establish geometry or performance at the road-speed condition that exposed the complaint.
- 118. C** — The valve responds but the route cannot carry the required flow through the confirmed obstruction. Correct and verify that passage under the procedure. Movement and accurate sensing describe separate conditions and cannot establish an unobstructed recirculation path in the actual system.
- 119. A** — Rearrange the supplied relation to force equals torque divided by radius. Thirty-six divided by 0.45 gives 80 N. The defined perpendicular geometry is necessary for this calculation; it does not authorize substituting another lever arrangement for the actual component's service test.
- 120. D** — The physical paths and interface activity exist, but its format does not match the receiver's defined requirement. Reconcile applicability and configuration and verify the delivered message. A self-test can confirm some internal behaviour without establishing compatibility with another system's actual interpretation.
- 121. D** — The data now transfers, but the installed information still does not represent the actual vehicle equipment. Correct and verify the separate configuration requirement. Communication success and physical fit cannot establish proper interpretation and operation of every affected function under the wrong variant settings.

122. B — The next operation changes the actual load path by removing a surface currently supporting the vehicle. Establish the approved replacement support condition before proceeding. Initial stability and a suitable rating cannot demonstrate support after one of the setup's bearing contacts no longer exists.

123. C — The reset coincides with a demonstrated supply loss at that module under its actual current demand. Repair and verify the connection before a software or bus disposition. An unloaded reading can comply while the same resistive path cannot maintain the required voltage when its load operates.

124. B — The coefficient relates friction force to the normal contact force in the defined model. Its actual value can depend on material and operating conditions. It is not a dimensional ratio of pressure, temperature, or component sizes, and the model does not replace vehicle-specific brake acceptance tests.

125. A — The fault involved release, so the repair must demonstrate the off-state and resulting shutdown as well as normal application. Audible movement does not establish contact isolation. A single powered pass cannot verify the separate condition that originally left the load drawing current.