

PRACTICE EXAM 7: SIGNAL MAINTAINER SIMULATION

(150 QUESTIONS)

This 150-question written practice simulation prepares decision sequencing, safety, electrical and electronic reasoning, electro-mechanical equipment, signals, detection, schematics, tools, troubleshooting, and records. The MTA New York City Transit Signal Maintainer assessment includes practical skills; this written set does not reproduce physical equipment handling. Use 65% as a study benchmark. The current official notice, local rules, and authorized training procedures control.

1. While isolating a suspected open circuit, a signal condition is unclear. What should be preserved first?
 - A. The technician's initial guess
 - B. The last permissive command
 - C. The most restrictive known state
 - D. The quickest visible indication

2. While reviewing a new trouble report, a drawing is available but the maintainer remembers a different circuit. Which reference controls?
 - A. The current authorized drawing
 - B. Personal memory of the circuit
 - C. An older printed copy
 - D. A nearby equipment label

3. After an unexpected indication appears, a planned task involves several workers and a live operating area. What should occur before work begins?

- A. A test without communication
- B. A reset of every control
- C. Immediate component removal
- D. A task briefing and hazard review

4. During a supervisor-directed diagnostic task, hazardous energy may remain after an isolation step. What is the next safe action?

- A. Verify the expected zero-energy condition
- B. Remove the warning tag
- C. Assume the isolation worked
- D. Begin probing the load

5. During a recurring-fault investigation, a test could change an indication seen by operations. What should happen before the test?

- A. Proceed silently to save time
- B. Disconnect the nearest relay
- C. Communicate and obtain required authorization
- D. Clear the indication manually

6. After a measurement does not match the prediction, a temporary jumper is installed during an authorized test. What is essential?

- A. Hide it inside the case
- B. Identify, control, and remove it under procedure
- C. Treat it as a permanent repair
- D. Leave it for the next shift

7. While preparing equipment for a functional test, a meter and lead set will be used near electrical energy. What should be checked?

- A. Whether the display is bright
- B. Ratings, condition, and intended measurement
- C. Only the battery level
- D. Only the color of the leads

8. When a signal response appears more permissive than expected, an instruction conflicts with the equipment condition or authority is unclear. What is the professional response?

- A. Stop and obtain clarification
- B. improvise a replacement step
- C. Continue until the symptom changes
- D. Ask an unqualified bystander

9. After a protective device operates, work is near an active trackway. Which priority controls the task?

- A. Keep the cabinet open
- B. Avoid documenting the delay
- C. Finish the measurement quickly
- D. Protect people and train movement first

10. While checking a battery-backed supply, poor visibility makes a field observation uncertain. What is the best response?

- A. Ignore the environmental condition
- B. Record a definite result anyway
- C. Control the hazard and improve the observation
- D. Move equipment without a briefing

11. When two indications do not agree, a work order does not clearly include a proposed change. What should the maintainer do?

- A. Expand the work to save a trip
- B. Confirm the authorized scope before changing equipment
- C. Use a previous job as permission
- D. Change the most accessible part

12. During a planned maintenance shift, a fault crosses the boundary between two maintenance groups. What makes the handoff useful?

- A. Send the equipment without notes
- B. Repeat every test without results
- C. Report only that it failed
- D. State condition, evidence, limits, and next action

13. Before beginning a wayside inspection, an event log may help explain an intermittent failure. What should happen to the record?

- A. Replace it with a guess
- B. Delete old events immediately
- C. Preserve it before resetting or clearing evidence
- D. Rely on memory after repair

14. While checking a recently restored circuit, a non-routine bypass appears necessary to continue. What is the proper decision?

- A. Escalate for authorized direction
- B. Install it because it is temporary
- C. Ask the operator to approve it casually
- D. Use it without labeling

15. When a normal indication is not present, a repair appears complete. What confirms the task is actually closed?

- A. Closing the equipment case only
- B. Removing the work order from the desk
- C. The original symptom disappearing once
- D. Test, restore, document, and communicate the final state

16. While confirming the limits of a work order, what does a voltage measurement between two points describe?

- A. The power rating of the fuse
- B. The potential difference between those points
- C. The current through every branch
- D. The resistance of the entire system

17. When a control-room report conflicts with field evidence, what must exist for current to flow through an intended control path?

- A. A ground label alone
- B. An open contact and no return
- C. A source, a complete path, and a load
- D. A meter connected in parallel

18. During a track-detection review, an open conductor is suspected in a control circuit. What is the defining condition?

- A. The intended path is interrupted
- B. The source has doubled
- C. The fuse becomes larger
- D. Every branch is shorted

19. While reviewing an intermittent failure history, what is a likely effect of an unintended low-resistance path across a source?

- A. Improved insulation resistance
- B. Excess current and possible protection operation
- C. Guaranteed lower load current
- D. A permanent open circuit

20. When an authorized procedure reaches an unclear step, a source reads normally with no load but falls at the load. What should be considered?

- A. A perfect circuit with no fault
- B. A change in signal color only
- C. A voltage drop or source-delivery problem
- D. A larger-than-normal conductor

21. During a post-maintenance return-to-service check, what is common to all elements in a simple series path?

- A. Every branch is independent
- B. No element affects another
- C. Each element has identical voltage
- D. The same current flows through each element

22. Before documenting the final condition, what is a key feature of parallel branches?

- A. They provide separate paths across common nodes
- B. They make every load series-connected
- C. They always carry identical current
- D. They eliminate the need for a return

23. In a controlled training scenario, why is polarity important in a DC control circuit?

- A. It determines how devices and protective paths operate
- B. It changes an AC waveform into a fuse
- C. It eliminates the need for a source
- D. It makes an open contact conductive

24. When preparing a handoff to the next maintainer, which distinction matters when selecting a measurement method?

- A. DC always has zero current
- B. AC and DC use identical instruments
- C. AC never uses a return
- D. AC alternates while DC maintains a substantially fixed polarity

25. After comparing the field condition with the drawing, what is a transformer commonly used to provide?

- A. A replacement for every fuse
- B. A changed AC voltage level or isolation
- C. A direct-current short circuit
- D. A mechanical switch position

26. Before making any temporary circuit change, what is the intended protective action of a fuse under sufficient overcurrent?

- A. It increases the source voltage
- B. It locks every route
- C. Its element opens the circuit
- D. It makes the load more conductive

27. During a weather-affected inspection, why must ground or reference be identified before measuring?

- A. It guarantees zero voltage everywhere
- B. The reference determines what the reading means
- C. It replaces the circuit drawing
- D. Ground always equals the load

28. After a switch movement does not complete, why can a de-energized circuit still require caution?

- A. The meter removes every hazard
- B. De-energized always means discharged
- C. Stored energy exists only in lamps
- D. Stored energy may remain in components or conductors

29. Before opening a relay or equipment case, what condition is normally required before measuring resistance in a circuit?

- A. The circuit is isolated from energized sources
- B. The load is forced on
- C. The fuse is bypassed
- D. The meter is placed across a live source

30. During a drawing and terminal audit, what can unexpected heat provide during a power investigation?

- A. Evidence that no load exists
- B. A reason to remove protection
- C. A clue that current or resistance is abnormal
- D. Proof that the circuit is healthy

31. After a route does not release as expected, what is the basic conduction behavior of a diode?

- A. It creates mechanical travel
- B. It stores every input forever
- C. It favors current in one direction
- D. It opens in both directions

32. While isolating a suspected open circuit, why may a zener device appear in a reference circuit?

- A. It provides mechanical locking
- B. It detects rail occupancy directly
- C. It replaces every relay contact
- D. It helps maintain a defined voltage region

33. While reviewing a new trouble report, how can a transistor function in a control circuit?

- A. As a controlled electronic switch
- B. As a permanent open wire
- C. As a mechanical limit stop
- D. As a track wheel shunt

34. After an unexpected indication appears, what separates a relay coil from its contacts?

- A. The contacts have no circuit function
- B. The coil's magnetic action controls isolated contacts
- C. The contacts are always the source
- D. The coil is a fuse element

35. During a supervisor-directed diagnostic task, what does normally open describe?

- A. Its voltage while energized
- B. Its guaranteed safe indication
- C. The defined normal condition of a contact
- D. Its resistance under every fault

36. During a recurring-fault investigation, what should be considered when an LED indication is dark?

- A. Only the remote display
- B. The device, polarity, source, and control path
- C. A guaranteed track occupancy
- D. Only the label color

37. After a measurement does not match the prediction, what is a useful first inspection of a printed circuit board?

- A. Reset the processor repeatedly
- B. Change every adjustment
- C. Remove all components
- D. Look for damage, contamination, and abnormal connections

38. While preparing equipment for a functional test, what can a poorly seated connector cause?

- A. Intermittent or missing signals
- B. A permanent increase in source voltage
- C. Automatic route release
- D. Guaranteed correct input logic

39. When a signal response appears more permissive than expected, what is electromagnetic interference likely to produce?

- A. A verified open circuit
- B. A higher fuse rating
- C. A mechanical lock position
- D. Unwanted disturbance coupled into equipment

40. After a protective device operates, what is a watchdog function intended to detect?

- A. Loss of expected processor activity
- B. A normal open contact
- C. A broken rail by sight
- D. A missing mechanical cover

41. While checking a battery-backed supply, why does an electronic input threshold matter?

- A. It changes a fuse into a relay
- B. It removes every noise source
- C. The input interprets a range as a logic state
- D. It proves the field device is aligned

42. When two indications do not agree, what is the purpose of optical isolation?

- A. Create a mechanical throw
- B. Transfer a signal while limiting direct electrical coupling
- C. Replace a current return
- D. Increase rail shunting

43. During a planned maintenance shift, why is electrostatic discharge control important around boards?

- A. It changes AC into DC
- B. It makes every relay pick up
- C. It improves track ballast
- D. A small discharge can damage sensitive components

44. Before beginning a wayside inspection, what is the safest way to interpret an HMI indication?

- A. Treat it as physical proof
- B. Compare it with field evidence and the current reference
- C. Ignore the field device
- D. Reset it until it agrees

45. While checking a recently restored circuit, why is a successful reset not necessarily a repair?

- A. The underlying cause may still be present
- B. The fault is proven permanent
- C. The source has been replaced
- D. A reset always changes wiring

46. When a normal indication is not present, what sequence best describes a powered switch movement?

- A. Route clearing without position proof
- B. Detection, removal, and guessing
- C. Command, motor action, movement, and detection
- D. Lamp change, fuse removal, and release

47. While confirming the limits of a work order, what may unusually high motor current suggest?

- A. Perfect alignment
- B. No load on the motor
- C. Obstruction, friction, or mechanical overload
- D. A healthy detection circuit

48. When a control-room report conflicts with field evidence, what does switch detection help prove?

- A. The route is automatically authorized
- B. The lamp has correct color
- C. The motor is always healthy
- D. The physical position meets the required condition

49. During a track-detection review, what is the first concern when a mechanism meets resistance?

- A. Protect the equipment and investigate the obstruction
- B. Ignore the resistance
- C. Apply more force immediately
- D. Bypass the lock

50. While reviewing an intermittent failure history, why is point alignment important to a switch function?

- A. It only changes cabinet lighting
- B. It affects movement, detection, and safe route conditions
- C. It removes the need for locking
- D. It proves the battery is charged

51. When an authorized procedure reaches an unclear step, what is the purpose of a mechanical or electrical lock?

- A. Create a permissive indication alone
- B. Replace all detection
- C. Prevent an unsafe change from the required position
- D. Increase motor speed

52. During a post-maintenance return-to-service check, what should a direction contactor provide in a motor circuit?

- A. Controlled selection of the commanded direction
- B. An automatic work authorization
- C. A permanent short across the motor
- D. A replacement for position detection

53. Before documenting the final condition, what can a limit or detection contact reveal?

- A. The weather forecast
- B. Whether a defined travel or position condition exists
- C. The source's full capacity
- D. A guaranteed root cause

54. In a controlled training scenario, why can contamination affect a mechanism?

- A. It eliminates lubrication needs
- B. It proves the motor is open
- C. It guarantees smoother travel
- D. It can add friction or interfere with contacts

55. When preparing a handoff to the next maintainer, what may repeated thermal protection operation indicate?

- A. A clean contact path
- B. A perfectly unloaded motor
- C. A persistent overload or inadequate cooling
- D. A correct route release

56. After comparing the field condition with the drawing, what should happen before dismantling a mechanical assembly?

- A. Observe and record the condition first
- B. Remove the detection wires
- C. Force the mechanism by hand
- D. Reset the remote display

57. Before making any temporary circuit change, what is required after an adjustment to a switch mechanism?

- A. Immediate release without testing
- B. A complete authorized functional and protective test
- C. A new unrelated adjustment
- D. A visual glance only

58. During a weather-affected inspection, when is manual movement of a powered mechanism acceptable?

- A. Before notifying operations
- B. Only when authorized and controlled by procedure
- C. Whenever the motor is slow
- D. When the route is unclear

59. After a switch movement does not complete, two indications disagree about switch position. What is the best conclusion?

- A. The field indication must be wrong
- B. The remote indication always controls
- C. The route can be cleared anyway
- D. The position is not yet proven

60. Before opening a relay or equipment case, what should the maintainer verify before closing a serviced equipment case?

- A. Only the original symptom
- B. Only the work order number
- C. Only the cabinet color
- D. Covers, fasteners, wiring, and restored condition

61. During a drawing and terminal audit, what gives a signal aspect its operating meaning?

- A. The brightness by itself
- B. The lamp brand alone
- C. The applicable rule and signal system
- D. A maintainer's preference

62. After a route does not release as expected, a signal is dark when a permissive display was expected. What is the safe interpretation?

- A. Treat the condition as restrictive until proven otherwise
- B. Assume the route is clear
- C. Replace the rule with memory
- D. Force the lamp on

63. While isolating a suspected open circuit, a signal lamp or LED is dark. What should be isolated?

- A. Only the remote screen
- B. Only the route label
- C. Only the lens
- D. The device, source, control path, and return

64. While reviewing a new trouble report, what is the best way to analyze a signal circuit?

- A. Clear the route first
- B. Start with the brightest lamp
- C. Trace source, logic, output, indication, and return
- D. Replace every relay

65. After an unexpected indication appears, what does a permissive indication not provide by itself?

- A. Any information about a display
- B. Blanket authorization to ignore governing rules
- C. A reason to read the drawing
- D. A condition that can be tested

66. During a supervisor-directed diagnostic task, why compare related indications during a fault?

- A. The comparison can reveal where states diverge
- B. It proves a lamp is good
- C. It authorizes a bypass
- D. It replaces all measurements

67. During a recurring-fault investigation, a signal appears clear but a required condition is unverified. What is the proper response?

- A. Reset the interlocking
- B. Proceed because the display is visible
- C. Ignore the missing proof
- D. Do not assume the permissive condition is valid

68. After a measurement does not match the prediction, how should an aspect test be designed?

- A. It should force the most permissive state
- B. It should verify the response without creating a false indication
- C. It should bypass protection
- D. It should change several inputs at once

69. While preparing equipment for a functional test, why can route conditions affect a signal aspect?

- A. The aspect depends on proven route and protection states
- B. The lens supplies the logic
- C. The indication is independent of occupancy
- D. The lamp chooses the route

70. When a signal response appears more permissive than expected, what should be separated when troubleshooting relay and electronic selection logic?

- A. The case cover and label
- B. Only the lamp color
- C. Input conditions, selection logic, and output state
- D. The work order and weather

71. After a protective device operates, how should color and position be interpreted?

- A. According to a generic internet chart
- B. According to personal experience only
- C. According to the governing local signal rules
- D. According to the nearest wire color

72. While checking a battery-backed supply, what should a persistent indication discrepancy become?

- A. A documented condition for authorized follow-up
- B. A reason to erase the log
- C. A permanent bypass
- D. A hidden informal adjustment

73. When two indications do not agree, what is the protective purpose of a train-stop function?

- A. Increase lamp intensity
- B. Guarantee a permissive movement
- C. Replace all track detection
- D. Initiate a restrictive response when required conditions fail

74. During a planned maintenance shift, a control-room indication conflicts with the field device. What should guide the next decision?

- A. The more permissive indication
- B. The discrepancy must be protected and investigated
- C. The older maintenance note
- D. A guessed equipment state

75. Before beginning a wayside inspection, what makes an intermittent aspect fault easier to analyze?

- A. A replacement without records
- B. Timestamps, sequence, and conditions of occurrence
- C. A report that says only intermittent
- D. A single reset

76. While checking a recently restored circuit, what does a train wheelset normally do to a track circuit?

- A. It provides a shunting path across the rails
- B. It clears the protected section
- C. It increases rail insulation
- D. It opens every relay coil

77. When a normal indication is not present, what does a track relay release generally indicate?

- A. The rail is guaranteed intact
- B. The route is automatically released
- C. The source is fully charged
- D. The detection circuit is no longer in its clear state

78. While confirming the limits of a work order, what should be considered when a track circuit loses its source?

- A. The rails become shorter
- B. The train stop is bypassed
- C. A receiver or relay may drop restrictive
- D. The indication must become permissive

79. When a control-room report conflicts with field evidence, why are rail bonds and connections important?

- A. They eliminate shunting
- B. They maintain the intended conductive path
- C. They create a permissive indication alone
- D. They replace the receiver

80. During a track-detection review, what can cause a false occupancy indication?

- A. A fault that prevents the expected clear response
- B. Only a brighter lamp
- C. A perfectly isolated rail
- D. A completed route release

81. While reviewing an intermittent failure history, what is the safe significance of a suspected broken rail response?

- A. The relay should be forced up
- B. The indication can be ignored
- C. The detection should favor a restrictive condition
- D. The signal should clear automatically

82. When an authorized procedure reaches an unclear step, why must track-circuit boundaries be identified?

- A. They make every relay identical
- B. They determine the weather
- C. They replace the current drawing
- D. They define which section the evidence applies to

83. During a post-maintenance return-to-service check, what does a coded track receiver interpret?

- A. A specified electrical or coded detection signal
- B. A mechanical switch throw
- C. A work-order number
- D. A lens color only

84. Before documenting the final condition, why must a train-movement detection test be controlled?

- A. It cannot affect a relay
- B. It removes the need for communication
- C. It can affect operating indications and protection
- D. It only changes cabinet temperature

85. In a controlled training scenario, local and remote occupancy indications disagree. What is established?

- A. The track is definitely clear
- B. The detection state is not yet resolved
- C. The remote display is always correct
- D. The field relay is always wrong

86. When preparing a handoff to the next maintainer, how can wet ballast affect a track circuit?

- A. It guarantees a clear response
- B. It removes the need for bonds
- C. It opens the relay by command
- D. It can reduce insulation and create leakage

87. After comparing the field condition with the drawing, what is required before performing a shunt test?

- A. A bypass of the receiver
- B. A cleared route without notice
- C. Authorization, protection, and the approved test method
- D. A casual verbal guess

88. Before making any temporary circuit change, what must be true before a clear indication is accepted?

- A. The last train has passed
- B. All required detection and protection conditions are proven
- C. Only the lamp is illuminated
- D. The relay case is closed

89. During a weather-affected inspection, what is useful when the same occupancy fault recurs?

- A. Compare trend information with prior conditions
- B. Erase earlier work records
- C. Repeat one reset only
- D. Change the indication label

90. After a switch movement does not complete, what should be verified after a detection repair?

- A. Only the relay cover
- B. Only the remote display
- C. Only the source voltage
- D. The intended occupied and clear responses

91. Before opening a relay or equipment case, what is the central purpose of interlocking?

- A. Prevent conflicting or unsafe combinations of movements
- B. Replace maintenance records
- C. Increase every signal aspect
- D. Remove track detection

92. During a drawing and terminal audit, what does route locking hold?

- A. Only the lamp lens
- B. Route elements against an unsafe change
- C. The weather condition
- D. A technician's personal setting

93. After a route does not release as expected, why does approach locking matter?

- A. It clears an occupied track
- B. It replaces signal rules
- C. It increases motor speed
- D. It limits casual changes after a train approaches

94. While isolating a suspected open circuit, what must a switch prove before a route can rely on it?

- A. Only the operator saw movement
- B. Only a command was sent
- C. The required position and detection condition
- D. Only the motor ran

95. While reviewing a new trouble report, why can occupancy prevent a signal from clearing?

- A. The lamp is too bright
- B. The protected route condition is not fully proven
- C. The work order is closed
- D. The relay label is missing

96. After an unexpected indication appears, what should be confirmed before clearing a signal?

- A. Only the nearest relay
- B. Only the last command
- C. Every required route, switch, and protection condition
- D. Only the signal head

97. During a supervisor-directed diagnostic task, what does a stick circuit commonly provide?

- A. A replacement for every input
- B. A permanent short circuit
- C. A mechanical lock only
- D. A controlled memory of a circuit state

98. During a recurring-fault investigation, missing proof in an interlocking condition should cause what response?

- A. A restrictive or non-permissive response
- B. An automatic route clear
- C. A forced relay pick-up
- D. A hidden bypass

99. After a measurement does not match the prediction, why test one interlocking condition at a time?

- A. It preserves cause-and-effect information
- B. It avoids reading the drawing
- C. It guarantees a faster repair
- D. It makes every fault disappear

100. While preparing equipment for a functional test, what is route release evidence used to establish?

- A. That the work order is unnecessary
- B. That the route can safely return to an available state
- C. That every lamp is new
- D. That the source is isolated

101. When a signal response appears more permissive than expected, what should be considered when control can be local or remote?

- A. Only the last screen viewed
- B. The more permissive command
- C. The closest lamp
- D. Which control location currently has authority

102. After a protective device operates, two conflicting commands appear at once. What is the safe approach?

- A. Apply both commands
- B. Clear the route manually
- C. Protect the condition and resolve the authority
- D. Accept the faster command

103. While checking a battery-backed supply, why is bypassing interlocking protection unacceptable without authorization?

- A. It can defeat a safety-critical dependency
- B. It proves the route is clear
- C. It always improves reliability
- D. It only changes paperwork

104. When two indications do not agree, what is needed after interlocking maintenance?

- A. A visual inspection only
- B. A permissive indication alone
- C. A documented functional test and controlled restoration
- D. A reset without records

105. During a planned maintenance shift, what is especially useful in a route fault?

- A. Only a remembered symptom
- B. The sequence of commands, indications, and releases
- C. Only a replacement part number
- D. Only the final lamp state

106. Before beginning a wayside inspection, what is the best starting point when reading a signal schematic?

- A. Ignore the return path
- B. Count every wire first
- C. Start at the nearest lamp
- D. Identify the function being controlled

107. While checking a recently restored circuit, what do schematic symbols and references provide?

- A. A standardized way to relate parts to functions
- B. A guarantee of current field condition
- C. A replacement for testing
- D. A route authorization

108. When a normal indication is not present, what does a contact's normal state describe?

- A. Its voltage under load
- B. Its defined condition before the operating action
- C. Its permitted route
- D. Its state during every fault

109. While confirming the limits of a work order, why trace both potential and current paths?

- A. Potential replaces the drawing
- B. They are always identical
- C. A voltage path may not complete current
- D. Current never needs a return

110. When a control-room report conflicts with field evidence, why are terminal numbers important?

- A. They set the fuse rating
- B. They determine aspect color
- C. They replace a test instrument
- D. They connect the drawing reference to field wiring

111. During a track-detection review, what does a wire label help establish?

- A. The route release time
- B. The weather condition
- C. The intended conductor identity and connection
- D. The measured current value

112. While reviewing an intermittent failure history, what can a parallel path or backfeed cause?

- A. A stronger insulation boundary
- B. A misleading voltage or unexpected operation
- C. A guaranteed open circuit
- D. A clean route release

113. When an authorized procedure reaches an unclear step, how should an open and a short be distinguished?

- A. An open interrupts; a short creates an unintended path
- B. Both always remove current
- C. Both mean the fuse is healthy
- D. Neither affects indications

114. During a post-maintenance return-to-service check, which drawing should be used for a field decision?

- A. A remembered sketch
- B. A generic internet diagram
- C. A superseded copy
- D. The current authorized revision

115. Before documenting the final condition, what should happen when field wiring differs from the drawing?

- A. Ignore the difference
- B. Edit the drawing informally
- C. Force the wire into place
- D. Protect the condition and report the discrepancy

116. In a controlled training scenario, how should a jumper appear in controlled documentation?

- A. Hidden from the record
- B. Shown as permanent wiring
- C. Identified with its location, purpose, and removal status
- D. Recorded only from memory

117. When preparing a handoff to the next maintainer, what does a revision marker help the maintainer determine?

- A. Which information changed and when
- B. Which lamp is brightest
- C. Which route is safest by itself
- D. Which relay is fastest

118. After comparing the field condition with the drawing, why identify the interface between control and field equipment?

- A. It replaces the work order
- B. It defines where evidence and responsibility change
- C. It eliminates the need for handoff
- D. It guarantees matching indications

119. Before making any temporary circuit change, what is useful to write on a schematic during diagnosis?

- A. Unmarked guesses
- B. Expected states and verified observations
- C. Permanent changes without approval
- D. Only the final answer

120. During a weather-affected inspection, what drawing information belongs in a technical handoff?

- A. The reference used and the relevant tested boundary
- B. Only the equipment color
- C. Only the technician's initials
- D. Only the drawing title

121. After a switch movement does not complete, how should a meter be selected?

- A. Select by lead color
- B. Use the largest display
- C. Match its function and rating to the task
- D. Choose the oldest instrument

122. Before opening a relay or equipment case, what should be inspected before using meter leads?

- A. Only the printed brand
- B. Only the case color
- C. Only the battery label
- D. Insulation, probes, connections, and condition

123. During a drawing and terminal audit, what is the purpose of a prove-test-prove sequence?

- A. Replace a circuit drawing
- B. Force the expected result
- C. Confirm the tester works before and after contact
- D. Increase the circuit voltage

124. After a route does not release as expected, where should a voltage measurement be placed?

- A. Across defined points that answer the next question
- B. Across a random wire pair
- C. Across any convenient cover
- D. At the nearest ground label

125. While isolating a suspected open circuit, when is a continuity test appropriate?

- A. Across a live power source
- B. Across an energized relay coil
- C. Before identifying the return
- D. On an isolated path whose connection is being checked

126. While reviewing a new trouble report, why should a circuit be isolated before resistance testing?

- A. Isolation increases current
- B. External energy can distort readings or damage meters
- C. The meter supplies every load
- D. Resistance requires a permissive signal

127. After an unexpected indication appears, how is current normally measured with a conventional meter?

- A. The meter is placed in series with the path
- B. The meter is clipped to the case
- C. The meter is placed across the source
- D. The leads are left open

128. During a supervisor-directed diagnostic task, what can a clamp meter help measure?

- A. A route lock position
- B. A lens alignment
- C. Current without opening the conductor path
- D. A schematic revision

129. During a recurring-fault investigation, what can an oscilloscope add to a signal investigation?

- A. A mechanical adjustment
- B. A permanent repair
- C. Automatic authorization
- D. Time and waveform information

130. After a measurement does not match the prediction, what controls the use of an insulation tester?

- A. The remote indication alone
- B. The authorized procedure and equipment limits
- C. A desire for a larger number
- D. The nearest open contact

131. While preparing equipment for a functional test, why does instrument category rating matter?

- A. It sets the signal aspect
- B. It shows the instrument's safe environment limits
- C. It identifies the wire label
- D. It replaces protective equipment

132. When a signal response appears more permissive than expected, why does probe placement matter?

- A. It guarantees a correct answer
- B. It removes circuit loading
- C. It changes the drawing revision
- D. The placement defines what the measurement actually compares

133. After a protective device operates, what should be selected before contacting a circuit?

- A. A range and function suitable for the expected value
- B. A setting chosen after contact
- C. The highest current range always
- D. A resistance range on a live source

134. While checking a battery-backed supply, what makes a measurement record useful?

- A. Only a rounded number
- B. Only the instrument brand
- C. Value, units, points, condition, and time
- D. Only the final diagnosis

135. When two indications do not agree, a measurement is unexpected. What should happen first?

- A. Ignore the reading
- B. Force the expected value
- C. Change the component immediately
- D. Recheck the instrument, reference, and circuit state

136. During a planned maintenance shift, what should be defined before troubleshooting begins?

- A. The most convenient test point
- B. The observed symptom and its operational effect
- C. The replacement part
- D. The final repair time

137. Before beginning a wayside inspection, how should a failure be reproduced?

- A. Only in a controlled, safe condition
- B. By repeating every unsafe action
- C. By bypassing protection
- D. By changing several variables

138. While checking a recently restored circuit, why are known-good and known-bad boundaries useful?

- A. They guarantee a failed component
- B. They replace authorization
- C. They narrow the suspected fault area
- D. They eliminate documentation

139. When a normal indication is not present, what is the purpose of dividing a circuit path?

- A. Separate possible fault locations using evidence
- B. Force the relay to pick up
- C. Make every branch identical
- D. Avoid measuring the source

140. While confirming the limits of a work order, what does a half-split method do?

- A. Changes two components at once
- B. Erases the original symptom
- C. Assumes the midpoint is faulty
- D. Tests a boundary that divides remaining possibilities

141. When a control-room report conflicts with field evidence, why change one variable at a time?

- A. It avoids reading the drawing
- B. It preserves the meaning of the result
- C. It guarantees the first guess
- D. It makes every repair permanent

142. During a track-detection review, what should be recorded for an intermittent fault?

- A. Only the word intermittent
- B. Only the successful reset
- C. Time, sequence, environment, and symptom conditions
- D. Only the final replacement

143. While reviewing an intermittent failure history, when is a wiggle or disturbance test acceptable?

- A. Whenever the fault is inconvenient
- B. Before recording the condition
- C. When authorized, controlled, and safe for the equipment
- D. As a substitute for every test

144. When an authorized procedure reaches an unclear step, why can a reset mislead a troubleshooter?

- A. It may clear the symptom without removing the cause
- B. It permanently changes the wiring
- C. It confirms the route is clear
- D. It always proves the board failed

145. During a post-maintenance return-to-service check, what separates evidence from assumption?

- A. A quick replacement
- B. An observed result that can be traced
- C. A confident explanation
- D. A familiar component name

146. Before documenting the final condition, what should happen at the limit of the maintainer's authority?

- A. Continue with an unapproved bypass
- B. Guess the missing procedure
- C. Release the equipment informally
- D. Stop, protect the condition, and escalate

147. In a controlled training scenario, what verifies that a correction worked?

- A. Repeat the original function and protection test
- B. A closed cabinet only
- C. A verbal promise
- D. A new symptom disappearing

148. When preparing a handoff to the next maintainer, what does root-cause thinking add after a symptom is corrected?

- A. It assumes the part was defective
- B. It replaces functional testing
- C. It asks why the failure occurred and could recur
- D. It ends documentation

149. After comparing the field condition with the drawing, what is valuable in a recurring-fault log?

- A. Only the latest repair
- B. Patterns across time, equipment, and conditions
- C. Only the operator's first guess
- D. Only the part price

150. Before making any temporary circuit change, what should be done when evidence remains insufficient?

- A. Change the largest component
- B. Close the record as complete
- C. Choose the most permissive answer
- D. Preserve the safe state and obtain support

Practice Exam 7: Answer Key and Explanations

- 1. C** — The correct answer is The most restrictive known state. In practice, preserve the most restrictive known state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 2. A** — The correct answer is The current authorized drawing. In practice, use the current authorized drawing. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 3. D** — The correct answer is A task briefing and hazard review. In practice, complete the task briefing and hazard review. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 4. A** — The correct answer is Verify the expected zero-energy condition. In practice, verify the expected zero-energy condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 5. C** — The correct answer is Communicate and obtain required authorization. In practice, communicate and obtain required authorization. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 6. B** — The correct answer is Identify, control, and remove it under procedure. In practice, identify, control, and remove it under procedure. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 7. B** — The correct answer is Ratings, condition, and intended measurement. In practice, check ratings, condition, and intended measurement. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 8. A** — The correct answer is Stop and obtain clarification. In practice, stop and obtain clarification. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.
- 9. D** — The correct answer is Protect people and train movement first. In practice, protect people and train movement first. This preserves the safest known condition. It gives the maintainer evidence for the

next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

10. C — The correct answer is Control the hazard and improve the observation. In practice, control the hazard and improve the observation. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

11. B — The correct answer is Confirm the authorized scope before changing equipment. In practice, confirm the authorized scope before changing equipment. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

12. D — The correct answer is State condition, evidence, limits, and next action. In practice, state condition, evidence, limits, and next action. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

13. C — The correct answer is Preserve it before resetting or clearing evidence. In practice, preserve it before resetting or clearing evidence. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

14. A — The correct answer is Escalate for authorized direction. In practice, escalate for authorized direction. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

15. D — The correct answer is Test, restore, document, and communicate the final state. In practice, test, restore, document, and communicate the final state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

16. B — The correct answer is The potential difference between those points. In practice, measure the potential difference between those points. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

17. C — The correct answer is A source, a complete path, and a load. In practice, confirm a source, complete path, and load. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

18. A — The correct answer is The intended path is interrupted. In practice, locate where the intended path is interrupted. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

19. B — The correct answer is Excess current and possible protection operation. In practice, treat excess current and protection operation as hazards. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

20. C — The correct answer is A voltage drop or source-delivery problem. In practice, investigate voltage drop or source delivery. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

21. D — The correct answer is The same current flows through each element. In practice, analyze the same current through each element. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

22. A — The correct answer is They provide separate paths across common nodes. In practice, analyze separate paths across common nodes. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

23. A — The correct answer is It determines how devices and protective paths operate. In practice, verify polarity before judging device operation. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

24. D — The correct answer is AC alternates while DC maintains a substantially fixed polarity. In practice, distinguish alternating from fixed polarity. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

25. B — The correct answer is A changed AC voltage level or isolation. In practice, check for changed AC level or isolation. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

26. C — The correct answer is Its element opens the circuit. In practice, expect the fuse element to open the circuit. This preserves the safest known condition. It gives the maintainer evidence for the next

decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

27. B — The correct answer is The reference determines what the reading means. In practice, identify the reference before interpreting the reading. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

28. D — The correct answer is Stored energy may remain in components or conductors. In practice, check for stored energy before contact. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

29. A — The correct answer is The circuit is isolated from energized sources. In practice, isolate the circuit before measuring resistance. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

30. C — The correct answer is A clue that current or resistance is abnormal. In practice, use heat as a clue to abnormal current or resistance. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

31. C — The correct answer is It favors current in one direction. In practice, test whether conduction favors one direction. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

32. D — The correct answer is It helps maintain a defined voltage region. In practice, check whether the reference voltage is defined. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

33. A — The correct answer is As a controlled electronic switch. In practice, evaluate its controlled switching state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

34. B — The correct answer is The coil's magnetic action controls isolated contacts. In practice, trace the coil action and contact state separately. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

35. C — The correct answer is The defined normal condition of a contact. In practice, use the drawing's defined normal condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

36. B — The correct answer is The device, polarity, source, and control path. In practice, check the device, polarity, source, and path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

37. D — The correct answer is Look for damage, contamination, and abnormal connections. In practice, inspect for damage, contamination, and connections. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

38. A — The correct answer is Intermittent or missing signals. In practice, check for intermittent or missing signals. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

39. D — The correct answer is Unwanted disturbance coupled into equipment. In practice, investigate unwanted coupled disturbance. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

40. A — The correct answer is Loss of expected processor activity. In practice, check for loss of expected processor activity. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

41. C — The correct answer is The input interprets a range as a logic state. In practice, compare the input with its logic threshold. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

42. B — The correct answer is Transfer a signal while limiting direct electrical coupling. In practice, limit direct electrical coupling while transferring the signal. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

43. D — The correct answer is A small discharge can damage sensitive components. In practice, control electrostatic discharge around sensitive components. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They

may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

44. B — The correct answer is Compare it with field evidence and the current reference. In practice, compare the HMI with field evidence and the reference. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

45. A — The correct answer is The underlying cause may still be present. In practice, look for the underlying cause after a reset. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

46. C — The correct answer is Command, motor action, movement, and detection. In practice, trace command, motor action, movement, and detection. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

47. C — The correct answer is Obstruction, friction, or mechanical overload. In practice, investigate obstruction, friction, or overload. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

48. D — The correct answer is The physical position meets the required condition. In practice, verify the physical position condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

49. A — The correct answer is Protect the equipment and investigate the obstruction. In practice, protect equipment and investigate the obstruction. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

50. B — The correct answer is It affects movement, detection, and safe route conditions. In practice, check movement, detection, and route conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

51. C — The correct answer is Prevent an unsafe change from the required position. In practice, prevent an unsafe change from the required position. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

52. A — The correct answer is Controlled selection of the commanded direction. In practice, verify controlled direction selection. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

53. B — The correct answer is Whether a defined travel or position condition exists. In practice, check whether the defined travel condition exists. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

54. D — The correct answer is It can add friction or interfere with contacts. In practice, inspect for added friction or contact interference. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

55. C — The correct answer is A persistent overload or inadequate cooling. In practice, investigate overload or inadequate cooling. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

56. A — The correct answer is Observe and record the condition first. In practice, observe and record the condition first. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

57. B — The correct answer is A complete authorized functional and protective test. In practice, complete the authorized functional and protective test. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

58. B — The correct answer is Only when authorized and controlled by procedure. In practice, use manual movement only when authorized and controlled. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

59. D — The correct answer is The position is not yet proven. In practice, treat the position as unproven. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

60. D — The correct answer is Covers, fasteners, wiring, and restored condition. In practice, verify covers, fasteners, wiring, and restoration. This preserves the safest known condition. It gives the

maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

61. C — The correct answer is The applicable rule and signal system. In practice, use the applicable rule and signal system. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

62. A — The correct answer is Treat the condition as restrictive until proven otherwise. In practice, treat the condition as restrictive until proven otherwise. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

63. D — The correct answer is The device, source, control path, and return. In practice, isolate the device, source, path, and return. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

64. C — The correct answer is Trace source, logic, output, indication, and return. In practice, trace source, logic, output, indication, and return. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

65. B — The correct answer is Blanket authorization to ignore governing rules. In practice, do not treat it as blanket authorization. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

66. A — The correct answer is The comparison can reveal where states diverge. In practice, locate where the states diverge. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

67. D — The correct answer is Do not assume the permissive condition is valid. In practice, do not assume the permissive condition is valid. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

68. B — The correct answer is It should verify the response without creating a false indication. In practice, verify the response without creating a false indication. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

69. A — The correct answer is The aspect depends on proven route and protection states. In practice, check the proven route and protection states. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

70. C — The correct answer is Input conditions, selection logic, and output state. In practice, separate inputs, logic, and output state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

71. C — The correct answer is According to the governing local signal rules. In practice, use the governing local signal rules. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

72. A — The correct answer is A documented condition for authorized follow-up. In practice, document the discrepancy for authorized follow-up. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

73. D — The correct answer is Initiate a restrictive response when required conditions fail. In practice, initiate a restrictive response when conditions fail. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

74. B — The correct answer is The discrepancy must be protected and investigated. In practice, protect and investigate the discrepancy. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

75. B — The correct answer is Timestamps, sequence, and conditions of occurrence. In practice, record timestamps, sequence, and occurrence conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

76. A — The correct answer is It provides a shunting path across the rails. In practice, recognize the wheelset shunting path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

77. D — The correct answer is The detection circuit is no longer in its clear state. In practice, treat the detection circuit as not clear. This preserves the safest known condition. It gives the maintainer evidence

for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

78. C — The correct answer is A receiver or relay may drop restrictive. In practice, check the restrictive response to source loss. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

79. B — The correct answer is They maintain the intended conductive path. In practice, verify the intended conductive path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

80. A — The correct answer is A fault that prevents the expected clear response. In practice, look for a fault preventing the clear response. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

81. C — The correct answer is The detection should favor a restrictive condition. In practice, expect a restrictive detection response. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

82. D — The correct answer is They define which section the evidence applies to. In practice, apply the evidence only to the defined section. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

83. A — The correct answer is A specified electrical or coded detection signal. In practice, verify the specified detection signal. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

84. C — The correct answer is It can affect operating indications and protection. In practice, control the test because it can affect protection. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

85. B — The correct answer is The detection state is not yet resolved. In practice, treat the detection state as unresolved. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

86. D — The correct answer is It can reduce insulation and create leakage. In practice, investigate reduced insulation and leakage. This preserves the safest known condition. It gives the maintainer

evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

87. C — The correct answer is Authorization, protection, and the approved test method. In practice, obtain authorization, protection, and the approved method. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

88. B — The correct answer is All required detection and protection conditions are proven. In practice, prove all required detection and protection conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

89. A — The correct answer is Compare trend information with prior conditions. In practice, compare trend information with prior conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

90. D — The correct answer is The intended occupied and clear responses. In practice, verify the intended occupied and clear responses. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

91. A — The correct answer is Prevent conflicting or unsafe combinations of movements. In practice, prevent conflicting or unsafe movement combinations. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

92. B — The correct answer is Route elements against an unsafe change. In practice, hold route elements against an unsafe change. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

93. D — The correct answer is It limits casual changes after a train approaches. In practice, limit changes after an approach condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

94. C — The correct answer is The required position and detection condition. In practice, prove required position and detection. This preserves the safest known condition. It gives the maintainer evidence for

the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

95. B — The correct answer is The protected route condition is not fully proven. In practice, recognize that route proof is incomplete. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

96. C — The correct answer is Every required route, switch, and protection condition. In practice, confirm every required route and protection condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

97. D — The correct answer is A controlled memory of a circuit state. In practice, analyze the controlled memory state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

98. A — The correct answer is A restrictive or non-permissive response. In practice, maintain a restrictive response when proof is missing. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

99. A — The correct answer is It preserves cause-and-effect information. In practice, preserve cause-and-effect information. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff. Use the same disciplined approach when conditions change.

100. B — The correct answer is That the route can safely return to an available state. In practice, establish whether the route can safely release. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

101. D — The correct answer is Which control location currently has authority. In practice, identify the control location with authority. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

102. C — The correct answer is Protect the condition and resolve the authority. In practice, protect the condition and resolve authority. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

103. A — The correct answer is It can defeat a safety-critical dependency. In practice, avoid defeating a safety-critical dependency. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

104. C — The correct answer is A documented functional test and controlled restoration. In practice, complete documented testing and controlled restoration. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

105. B — The correct answer is The sequence of commands, indications, and releases. In practice, reconstruct the sequence of commands and releases. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

106. D — The correct answer is Identify the function being controlled. In practice, identify the function being controlled. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

107. A — The correct answer is A standardized way to relate parts to functions. In practice, relate standardized symbols to functions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

108. B — The correct answer is Its defined condition before the operating action. In practice, use the defined condition before operating action. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

109. C — The correct answer is A voltage path may not complete current. In practice, distinguish potential from a complete current path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

110. D — The correct answer is They connect the drawing reference to field wiring. In practice, connect the drawing reference to field wiring. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

111. C — The correct answer is The intended conductor identity and connection. In practice, confirm conductor identity and connection. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

112. B — The correct answer is A misleading voltage or unexpected operation. In practice, investigate misleading voltage or unexpected operation. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

113. A — The correct answer is An open interrupts; a short creates an unintended path. In practice, distinguish interruption from an unintended path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

114. D — The correct answer is The current authorized revision. In practice, use the current authorized revision. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

115. D — The correct answer is Protect the condition and report the discrepancy. In practice, protect the condition and report the discrepancy. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

116. C — The correct answer is Identified with its location, purpose, and removal status. In practice, identify location, purpose, and removal status. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

117. A — The correct answer is Which information changed and when. In practice, determine what changed and when. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

118. B — The correct answer is It defines where evidence and responsibility change. In practice, define where evidence and responsibility change. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

119. B — The correct answer is Expected states and verified observations. In practice, mark expected states and verified observations. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

120. A — The correct answer is The reference used and the relevant tested boundary. In practice, state the reference and tested boundary. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

121. C — The correct answer is Match its function and rating to the task. In practice, match function and rating to the task. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

122. D — The correct answer is Insulation, probes, connections, and condition. In practice, inspect insulation, probes, connections, and condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

123. C — The correct answer is Confirm the tester works before and after contact. In practice, confirm the tester before and after contact. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

124. A — The correct answer is Across defined points that answer the next question. In practice, measure across defined points. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

125. D — The correct answer is On an isolated path whose connection is being checked. In practice, test an isolated path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

126. B — The correct answer is External energy can distort readings or damage meters. In practice, isolate the circuit before resistance testing. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

127. A — The correct answer is The meter is placed in series with the path. In practice, place the meter in series with the path. This preserves the safest known condition. It gives the maintainer evidence for

the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

128. C — The correct answer is Current without opening the conductor path. In practice, measure current without opening the path. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

129. D — The correct answer is Time and waveform information. In practice, observe time and waveform information. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

130. B — The correct answer is The authorized procedure and equipment limits. In practice, follow the authorized procedure and limits. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

131. B — The correct answer is It shows the instrument's safe environment limits. In practice, use the instrument within its rated environment. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

132. D — The correct answer is The placement defines what the measurement actually compares. In practice, define the comparison made by the measurement. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

133. A — The correct answer is A range and function suitable for the expected value. In practice, select a suitable range and function first. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

134. C — The correct answer is Value, units, points, condition, and time. In practice, record value, units, points, condition, and time. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

135. D — The correct answer is Recheck the instrument, reference, and circuit state. In practice, recheck the instrument, reference, and state. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

136. B — The correct answer is The observed symptom and its operational effect. In practice, define the symptom and operational effect. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

137. A — The correct answer is Only in a controlled, safe condition. In practice, reproduce it only in a controlled way. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

138. C — The correct answer is They narrow the suspected fault area. In practice, narrow the suspected fault area. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

139. A — The correct answer is Separate possible fault locations using evidence. In practice, separate fault locations using evidence. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

140. D — The correct answer is Tests a boundary that divides remaining possibilities. In practice, test a boundary that divides possibilities. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

141. B — The correct answer is It preserves the meaning of the result. In practice, preserve the meaning of the result. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

142. C — The correct answer is Time, sequence, environment, and symptom conditions. In practice, record time, sequence, environment, and conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

143. C — The correct answer is When authorized, controlled, and safe for the equipment. In practice, use it only when authorized and controlled. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

144. A — The correct answer is It may clear the symptom without removing the cause. In practice, look for the cause beyond the reset. This preserves the safest known condition. It gives the maintainer

evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

145. B — The correct answer is An observed result that can be traced. In practice, trace the conclusion to an observed condition. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

146. D — The correct answer is Stop, protect the condition, and escalate. In practice, stop, protect, and escalate. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

147. A — The correct answer is Repeat the original function and protection test. In practice, repeat the original function and protection test. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

148. C — The correct answer is It asks why the failure occurred and could recur. In practice, ask why the failure occurred and could recur. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change.

149. B — The correct answer is Patterns across time, equipment, and conditions. In practice, compare patterns across time and conditions. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.

150. D — The correct answer is Preserve the safe state and obtain support. In practice, preserve the safe state and obtain support. This preserves the safest known condition. It gives the maintainer evidence for the next decision. The alternatives rely on unverified assumptions. They may bypass a safeguard or introduce an unnecessary change. Record the result for restoration, review, and handoff.