

PRACTICE EXAM 13: 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. During a supervisor-directed diagnostic task, a signal condition is unclear. What should be preserved first?

- A. The technician's initial guess
- B. The last permissive command
- C. The quickest visible indication
- D. The most restrictive known state

2. During a recurring-fault investigation, a drawing is available but the maintainer remembers a different circuit. Which reference controls?

- A. Personal memory of the circuit
- B. The current authorized drawing
- C. An older printed copy
- D. A nearby equipment label

3. After a measurement does not match the prediction, 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. A task briefing and hazard review
- D. Immediate component removal

4. While preparing equipment for a functional test, hazardous energy may remain after an isolation step. What is the next safe action?

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

5. When a signal response appears more permissive than expected, a test could change an indication seen by operations. What should happen before the test?

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

6. After a protective device operates, a temporary jumper is installed during an authorized test. What is essential?

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

7. While checking a battery-backed supply, a meter and lead set will be used near electrical energy. What should be checked?

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

8. When two indications do not agree, an instruction conflicts with the equipment condition or authority is unclear. What is the professional response?

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

9. During a planned maintenance shift, work is near an active trackway. Which priority controls the task?

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

10. Before beginning a wayside inspection, poor visibility makes a field observation uncertain. What is the best response?

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

11. While checking a recently restored circuit, a work order does not clearly include a proposed change. What should the maintainer do?

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

12. When a normal indication is not present, a fault crosses the boundary between two maintenance groups. What makes the handoff useful?

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

13. While confirming the limits of a work order, 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. When a control-room report conflicts with field evidence, 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. During a track-detection review, 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 reviewing an intermittent failure history, what does a voltage measurement between two points describe?

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

17. When an authorized procedure reaches an unclear step, what must exist for current to flow through an intended control path?

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

18. During a post-maintenance return-to-service check, an open conductor is suspected in a control circuit. What is the defining condition?

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

19. Before documenting the final condition, what is a likely effect of an unintended low-resistance path across a source?

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

20. In a controlled training scenario, 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 larger-than-normal conductor
- D. A voltage drop or source-delivery problem

21. When preparing a handoff to the next maintainer, what is common to all elements in a simple series path?

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

22. After comparing the field condition with the drawing, 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. Before making any temporary circuit change, why is polarity important in a DC control circuit?

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

24. During a weather-affected inspection, which distinction matters when selecting a measurement method?

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

25. After a switch movement does not complete, what is a transformer commonly used to provide?

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

26. Before opening a relay or equipment case, what is the intended protective action of a fuse under sufficient overcurrent?

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

27. During a drawing and terminal audit, 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 route does not release as expected, why can a de-energized circuit still require caution?

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

29. While isolating a suspected open circuit, what condition is normally required before measuring resistance in a circuit?

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

30. While reviewing a new trouble report, 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 an unexpected indication appears, what is the basic conduction behavior of a diode?

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

32. During a supervisor-directed diagnostic task, why may a zener device appear in a reference circuit?

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

33. During a recurring-fault investigation, how can a transistor function in a control circuit?

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

34. After a measurement does not match the prediction, what separates a relay coil from its contacts?

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

35. While preparing equipment for a functional test, what does normally open describe?

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

36. When a signal response appears more permissive than expected, what should be considered when an LED indication is dark?

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

37. After a protective device operates, what is a useful first inspection of a printed circuit board?

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

38. While checking a battery-backed supply, what can a poorly seated connector cause?

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

39. When two indications do not agree, 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. During a planned maintenance shift, what is a watchdog function intended to detect?

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

41. Before beginning a wayside inspection, why does an electronic input threshold matter?

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

42. While checking a recently restored circuit, what is the purpose of optical isolation?

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

43. When a normal indication is not present, why is electrostatic discharge control important around boards?

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

44. While confirming the limits of a work order, what is the safest way to interpret an HMI indication?

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

45. When a control-room report conflicts with field evidence, why is a successful reset not necessarily a repair?

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

46. During a track-detection review, what sequence best describes a powered switch movement?

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

47. While reviewing an intermittent failure history, what may unusually high motor current suggest?

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

48. When an authorized procedure reaches an unclear step, what does switch detection help prove?

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

49. During a post-maintenance return-to-service check, what is the first concern when a mechanism meets resistance?

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

50. Before documenting the final condition, why is point alignment important to a switch function?

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

51. In a controlled training scenario, what is the purpose of a mechanical or electrical lock?

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

52. When preparing a handoff to the next maintainer, 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. After comparing the field condition with the drawing, what can a limit or detection contact reveal?

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

54. Before making any temporary circuit change, 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. During a weather-affected inspection, 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 a switch movement does not complete, what should happen before dismantling a mechanical assembly?

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

57. Before opening a relay or equipment case, what is required after an adjustment to a switch mechanism?

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

58. During a drawing and terminal audit, when is manual movement of a powered mechanism acceptable?

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

59. After a route does not release as expected, two indications disagree about switch position. What is the best conclusion?

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

60. While isolating a suspected open circuit, 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. While reviewing a new trouble report, 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 an unexpected indication appears, a signal is dark when a permissive display was expected. What is the safe interpretation?

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

63. During a supervisor-directed diagnostic task, a signal lamp or LED is dark. What should be isolated?

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

64. During a recurring-fault investigation, what is the best way to analyze a signal circuit?

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

65. After a measurement does not match the prediction, what does a permissive indication not provide by itself?

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

66. While preparing equipment for a functional test, why compare related indications during a fault?

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

67. When a signal response appears more permissive than expected, 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 protective device operates, 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 checking a battery-backed supply, 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 two indications do not agree, 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. During a planned maintenance shift, 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. Before beginning a wayside inspection, 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. While checking a recently restored circuit, what is the protective purpose of a train-stop function?

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

74. When a normal indication is not present, a control-room indication conflicts with the field device. What should guide the next decision?

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

75. While confirming the limits of a work order, what makes an intermittent aspect fault easier to analyze?

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

76. When a control-room report conflicts with field evidence, what does a train wheelset normally do to a track circuit?

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

77. During a track-detection review, what does a track relay release generally indicate?

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

78. While reviewing an intermittent failure history, 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 an authorized procedure reaches an unclear step, why are rail bonds and connections important?

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

80. During a post-maintenance return-to-service check, what can cause a false occupancy indication?

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

81. Before documenting the final condition, what is the safe significance of a suspected broken rail response?

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

82. In a controlled training scenario, why must track-circuit boundaries be identified?

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

83. When preparing a handoff to the next maintainer, 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. After comparing the field condition with the drawing, 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. Before making any temporary circuit change, 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. During a weather-affected inspection, 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 a switch movement does not complete, what is required before performing a shunt test?

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

88. Before opening a relay or equipment case, what must be true before a clear indication is accepted?

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

89. During a drawing and terminal audit, what is useful when the same occupancy fault recurs?

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

90. After a route does not release as expected, what should be verified after a detection repair?

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

91. While isolating a suspected open circuit, 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. While reviewing a new trouble report, what does route locking hold?

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

93. After an unexpected indication appears, why does approach locking matter?

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

94. During a supervisor-directed diagnostic task, 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. Only the motor ran
- D. The required position and detection condition

95. During a recurring-fault investigation, why can occupancy prevent a signal from clearing?

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

96. After a measurement does not match the prediction, 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. While preparing equipment for a functional test, what does a stick circuit commonly provide?

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

98. When a signal response appears more permissive than expected, missing proof in an interlocking condition should cause what response?

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

99. After a protective device operates, why test one interlocking condition at a time?

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

100. While checking a battery-backed supply, 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 two indications do not agree, 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. During a planned maintenance shift, two conflicting commands appear at once. What is the safe approach?

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

103. Before beginning a wayside inspection, why is bypassing interlocking protection unacceptable without authorization?

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

104. While checking a recently restored circuit, what is needed after interlocking maintenance?

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

105. When a normal indication is not present, 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. While confirming the limits of a work order, 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. When a control-room report conflicts with field evidence, what do schematic symbols and references provide?

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

108. During a track-detection review, what does a contact's normal state describe?

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

109. While reviewing an intermittent failure history, 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 an authorized procedure reaches an unclear step, why are terminal numbers important?

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

111. During a post-maintenance return-to-service check, what does a wire label help establish?

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

112. Before documenting the final condition, 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. In a controlled training scenario, 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. When preparing a handoff to the next maintainer, which drawing should be used for a field decision?

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

115. After comparing the field condition with the drawing, what should happen when field wiring differs from the drawing?

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

116. Before making any temporary circuit change, how should a jumper appear in controlled documentation?

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

117. During a weather-affected inspection, what does a revision marker help the maintainer determine?

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

118. After a switch movement does not complete, why identify the interface between control and field equipment?

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

119. Before opening a relay or equipment case, what is useful to write on a schematic during diagnosis?

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

120. During a drawing and terminal audit, what drawing information belongs in a technical handoff?

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

121. After a route does not release as expected, 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. While isolating a suspected open circuit, 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. While reviewing a new trouble report, what is the purpose of a prove-test-prove sequence?

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

124. After an unexpected indication appears, where should a voltage measurement be placed?

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

125. During a supervisor-directed diagnostic task, when is a continuity test appropriate?

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

126. During a recurring-fault investigation, why should a circuit be isolated before resistance testing?

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

127. After a measurement does not match the prediction, how is current normally measured with a conventional meter?

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

128. While preparing equipment for a functional test, what can a clamp meter help measure?

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

129. When a signal response appears more permissive than expected, what can an oscilloscope add to a signal investigation?

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

130. After a protective device operates, 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 checking a battery-backed supply, why does instrument category rating matter?

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

132. When two indications do not agree, why does probe placement matter?

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

133. During a planned maintenance shift, what should be selected before contacting a circuit?

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

134. Before beginning a wayside inspection, 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. While checking a recently restored circuit, a measurement is unexpected. What should happen first?

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

136. When a normal indication is not present, what should be defined before troubleshooting begins?

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

137. While confirming the limits of a work order, how should a failure be reproduced?

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

138. When a control-room report conflicts with field evidence, 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. During a track-detection review, what is the purpose of dividing a circuit path?

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

140. While reviewing an intermittent failure history, what does a half-split method do?

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

141. When an authorized procedure reaches an unclear step, why change one variable at a time?

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

142. During a post-maintenance return-to-service check, 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. Before documenting the final condition, when is a wiggle or disturbance test acceptable?

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

144. In a controlled training scenario, why can a reset mislead a troubleshooter?

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

145. When preparing a handoff to the next maintainer, what separates evidence from assumption?

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

146. After comparing the field condition with the drawing, what should happen at the limit of the maintainer's authority?

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

147. Before making any temporary circuit change, what verifies that a correction worked?

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

148. During a weather-affected inspection, 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 ends documentation
- D. It asks why the failure occurred and could recur

149. After a switch movement does not complete, what is valuable in a recurring-fault log?

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

150. Before opening a relay or equipment case, what should be done when evidence remains insufficient?

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

Practice Exam 13: Answer Key and Explanations

- 1. D** — 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. B** — 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. C** — 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. D** — 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. B** — 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. A** — 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. A** — 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. C** — 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. B** — 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. D — 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. D — 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. B — 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. C — 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. A — 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. B — 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. C — 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. D — 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. B — 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. C — 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. A — 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. D — 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. B — 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. A — 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. D — 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. A — 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. B — 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. D — 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. C — 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. B — 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. C — 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. A — 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. D — 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. B — 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. A — 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. C — 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. C — 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. A — 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. D — 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. B — 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. D — 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. B — 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. C — 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. A — 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. B — 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. C — 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. B — 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. A — 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. D — 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. A — 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. B — 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. A — 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. B — 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. C — 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. D — 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. B — 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. D — 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. A — 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. D — 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. B — 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. C — 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. D — 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. B — 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. A — 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. D — 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. A — 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. C — 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. B — 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. C — 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. B — 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. D — 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. D — 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. A — 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. B — 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. C — 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. A — 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. C — 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. A — 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. B — 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. D — 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. A — 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. D — 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. C — 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. B — 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. D — 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. C — 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. A — 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. A — 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. B — 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. A — 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. D — 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. B — 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. C — 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. D — 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. A — 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. C — 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. D — 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. A — 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. B — 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. A — 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. D — 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. B — 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. D — 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. B — 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. A — 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. A — 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. D — 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. C — 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. B — 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. B — 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. D — 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. A — 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. C — 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.