PRACTICE EXAM 6: SIGNAL MAINTAINER SIMULATION (150 QUESTIONS)

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

1. While confirming the limits of a work order, a signal condition is unclear. What should be preserved first?

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

2. When a control-room report conflicts with field evidence, a drawing is available but the maintainer remembers a different circuit. Which reference controls?

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

3. During a track-detection review, a planned task involves several workers and a live operating area. What should occur before work begins?

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

4. While reviewing an intermittent failure history, hazardous energy may remain after an isolation step. What is the next safe action?

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

5. When an authorized procedure reaches an unclear step, a test could change an indication seen by operations. What should happen before the test?

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

6. During a post-maintenance return-to-service check, a temporary jumper is installed during an authorized test. What is essential?

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

7. Before documenting the final condition, a meter and lead set will be used near electrical energy. What should be checked?

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

8. In a controlled training scenario, an instruction conflicts with the equipment condition or authority is unclear. What is the professional response?

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

9. When preparing a handoff to the next maintainer, work is near an active trackway. Which priority controls the task?

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

10. After comparing the field condition with the drawing, poor visibility makes a field observation uncertain. What is the best response?

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

11. Before making any temporary circuit change, a work order does not clearly include a proposed change. What should the maintainer do?

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

12. During a weather-affected inspection, a fault crosses the boundary between two maintenance groups. What makes the handoff useful?

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

13. After a switch movement does not complete, an event log may help explain an intermittent failure. What should happen to the record?

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

14. Before opening a relay or equipment case, a non-routine bypass appears necessary to continue. What is the proper decision?

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

15. During a drawing and terminal audit, a repair appears complete. What confirms the task is actually closed?

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

16. After a route does not release as expected, what does a voltage measurement between two points describe?

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

17. While isolating a suspected open circuit, what must exist for current to flow through an intended control path?

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

18. While reviewing a new trouble report, an open conductor is suspected in a control circuit. What is the defining condition?

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

19. After an unexpected indication appears, what is a likely effect of an unintended low-resistance path across a source?

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

20. During a supervisor-directed diagnostic task, a source reads normally with no load but falls at the load. What should be considered?

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

21. During a recurring-fault investigation, what is common to all elements in a simple series path?

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

22. After a measurement does not match the prediction, what is a key feature of parallel branches?

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

23. While preparing equipment for a functional test, why is polarity important in a DC control circuit?

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

24. When a signal response appears more permissive than expected, which distinction matters when selecting a measurement method?

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

25. After a protective device operates, what is a transformer commonly used to provide?

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

26. While checking a battery-backed supply, what is the intended protective action of a fuse under sufficient overcurrent?

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

27. When two indications do not agree, why must ground or reference be identified before measuring?

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

28. During a planned maintenance shift, why can a de-energized circuit still require caution?

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

29. Before beginning a wayside inspection, what condition is normally required before measuring resistance in a circuit?

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

30. While checking a recently restored circuit, what can unexpected heat provide during a power investigation?

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

31. When a normal indication is not present, what is the basic conduction behavior of a diode?

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

32. While confirming the limits of a work order, why may a zener device appear in a reference circuit?

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

33. When a control-room report conflicts with field evidence, how can a transistor function in a control circuit?

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

34. During a track-detection review, what separates a relay coil from its contacts?

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

35. While reviewing an intermittent failure history, what does normally open describe?

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

36. When an authorized procedure reaches an unclear step, what should be considered when an LED indication is dark?

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

37. During a post-maintenance return-to-service check, what is a useful first inspection of a printed circuit board?

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

38. Before documenting the final condition, what can a poorly seated connector cause?

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

39. In a controlled training scenario, what is electromagnetic interference likely to produce?

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

40. When preparing a handoff to the next maintainer, what is a watchdog function intended to detect?

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

41. After comparing the field condition with the drawing, why does an electronic input threshold matter?

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

42. Before making any temporary circuit change, what is the purpose of optical isolation?

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

43. During a weather-affected inspection, why is electrostatic discharge control important around boards?

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

44. After a switch movement does not complete, what is the safest way to interpret an HMI indication?

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

45. Before opening a relay or equipment case, why is a successful reset not necessarily a repair?

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

46. During a drawing and terminal audit, what sequence best describes a powered switch movement?

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

47. After a route does not release as expected, what may unusually high motor current suggest?

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

48. While isolating a suspected open circuit, what does switch detection help prove?

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

49. While reviewing a new trouble report, what is the first concern when a mechanism meets resistance?

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

50. After an unexpected indication appears, why is point alignment important to a switch function?

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

51. During a supervisor-directed diagnostic task, what is the purpose of a mechanical or electrical lock?

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

52. During a recurring-fault investigation, what should a direction contactor provide in a motor circuit?

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

53. After a measurement does not match the prediction, what can a limit or detection contact reveal?

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

54. While preparing equipment for a functional test, why can contamination affect a mechanism?

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

55. When a signal response appears more permissive than expected, what may repeated thermal protection operation indicate?

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

56. After a protective device operates, what should happen before dismantling a mechanical assembly?

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

57. While checking a battery-backed supply, what is required after an adjustment to a switch mechanism?

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

58. When two indications do not agree, when is manual movement of a powered mechanism acceptable?

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

59. During a planned maintenance shift, two indications disagree about switch position. What is the best conclusion?

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

60. Before beginning a wayside inspection, what should the maintainer verify before closing a serviced equipment case?

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

61. While checking a recently restored circuit, what gives a signal aspect its operating meaning?

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

62. When a normal indication is not present, a signal is dark when a permissive display was expected. What is the safe interpretation?

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

63. While confirming the limits of a work order, a signal lamp or LED is dark. What should be isolated?

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

64. When a control-room report conflicts with field evidence, what is the best way to analyze a signal circuit?

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

65. During a track-detection review, what does a permissive indication not provide by itself?

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

66. While reviewing an intermittent failure history, why compare related indications during a fault?

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

67. When an authorized procedure reaches an unclear step, a signal appears clear but a required condition is unverified. What is the proper response?

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

68. During a post-maintenance return-to-service check, how should an aspect test be designed?

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

69. Before documenting the final condition, why can route conditions affect a signal aspect?

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

70. In a controlled training scenario, what should be separated when troubleshooting relay and electronic selection logic?

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

71. When preparing a handoff to the next maintainer, how should color and position be interpreted?

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

72. After comparing the field condition with the drawing, what should a persistent indication discrepancy become?

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

73. Before making any temporary circuit change, what is the protective purpose of a train-stop function?

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

74. During a weather-affected inspection, a control-room indication conflicts with the field device. What should guide the next decision?

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

75. After a switch movement does not complete, what makes an intermittent aspect fault easier to analyze?

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

76. Before opening a relay or equipment case, what does a train wheelset normally do to a track circuit?

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

77. During a drawing and terminal audit, what does a track relay release generally indicate?

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

78. After a route does not release as expected, what should be considered when a track circuit loses its source?

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

79. While isolating a suspected open circuit, why are rail bonds and connections important?

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

80. While reviewing a new trouble report, what can cause a false occupancy indication?

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

81. After an unexpected indication appears, what is the safe significance of a suspected broken rail response?

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

82. During a supervisor-directed diagnostic task, why must track-circuit boundaries be identified?

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

83. During a recurring-fault investigation, what does a coded track receiver interpret?

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

84. After a measurement does not match the prediction, why must a train-movement detection test be controlled?

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

85. While preparing equipment for a functional test, local and remote occupancy indications disagree. What is established?

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

86. When a signal response appears more permissive than expected, how can wet ballast affect a track circuit?

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

87. After a protective device operates, what is required before performing a shunt test?

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

88. While checking a battery-backed supply, what must be true before a clear indication is accepted?

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

89. When two indications do not agree, what is useful when the same occupancy fault recurs?

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

90. During a planned maintenance shift, what should be verified after a detection repair?

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

91. Before beginning a wayside inspection, what is the central purpose of interlocking?

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

92. While checking a recently restored circuit, what does route locking hold?

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

93. When a normal indication is not present, why does approach locking matter?

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

94. While confirming the limits of a work order, what must a switch prove before a route can rely on it?

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

95. When a control-room report conflicts with field evidence, why can occupancy prevent a signal from clearing?

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

96. During a track-detection review, what should be confirmed before clearing a signal?

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

97. While reviewing an intermittent failure history, what does a stick circuit commonly provide?

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

98. When an authorized procedure reaches an unclear step, missing proof in an interlocking condition should cause what response?

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

99. During a post-maintenance return-to-service check, why test one interlocking condition at a time?

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

100. Before documenting the final condition, what is route release evidence used to establish?

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

101. In a controlled training scenario, what should be considered when control can be local or remote?

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

102. When preparing a handoff to the next maintainer, two conflicting commands appear at once. What is the safe approach?

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

103. After comparing the field condition with the drawing, why is bypassing interlocking protection unacceptable without authorization?

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

104. Before making any temporary circuit change, what is needed after interlocking maintenance?

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

105. During a weather-affected inspection, what is especially useful in a route fault?

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

106. After a switch movement does not complete, what is the best starting point when reading a signal schematic?

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

107. Before opening a relay or equipment case, what do schematic symbols and references provide?

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

108. During a drawing and terminal audit, what does a contact's normal state describe?

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

109. After a route does not release as expected, why trace both potential and current paths?

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

110. While isolating a suspected open circuit, why are terminal numbers important?

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

111. While reviewing a new trouble report, what does a wire label help establish?

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

112. After an unexpected indication appears, what can a parallel path or backfeed cause?

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

113. During a supervisor-directed diagnostic task, how should an open and a short be distinguished?

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

114. During a recurring-fault investigation, which drawing should be used for a field decision?

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

115. After a measurement does not match the prediction, what should happen when field wiring differs from the drawing?

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

116. While preparing equipment for a functional test, how should a jumper appear in controlled documentation?

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

117. When a signal response appears more permissive than expected, what does a revision marker help the maintainer determine?

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

118. After a protective device operates, why identify the interface between control and field equipment?

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

119. While checking a battery-backed supply, what is useful to write on a schematic during diagnosis?

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

120. When two indications do not agree, what drawing information belongs in a technical handoff?

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

121. During a planned maintenance shift, how should a meter be selected?

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

122. Before beginning a wayside inspection, what should be inspected before using meter leads?

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

123. While checking a recently restored circuit, what is the purpose of a prove-test-prove sequence?

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

124. When a normal indication is not present, where should a voltage measurement be placed?

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

125. While confirming the limits of a work order, when is a continuity test appropriate?

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

126. When a control-room report conflicts with field evidence, why should a circuit be isolated before resistance testing?

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

127. During a track-detection review, how is current normally measured with a conventional meter?

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

128. While reviewing an intermittent failure history, what can a clamp meter help measure?

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

129. When an authorized procedure reaches an unclear step, what can an oscilloscope add to a signal investigation?

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

130. During a post-maintenance return-to-service check, what controls the use of an insulation tester?

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

131. Before documenting the final condition, why does instrument category rating matter?

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

132. In a controlled training scenario, why does probe placement matter?

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

133. When preparing a handoff to the next maintainer, what should be selected before contacting a circuit?

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

134. After comparing the field condition with the drawing, what makes a measurement record useful?

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

135. Before making any temporary circuit change, a measurement is unexpected. What should happen first?

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

136. During a weather-affected inspection, what should be defined before troubleshooting begins?

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

137. After a switch movement does not complete, how should a failure be reproduced?

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

138. Before opening a relay or equipment case, why are known-good and known-bad boundaries useful?

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

139. During a drawing and terminal audit, what is the purpose of dividing a circuit path?

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

140. After a route does not release as expected, what does a half-split method do?

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

141. While isolating a suspected open circuit, why change one variable at a time?

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

142. While reviewing a new trouble report, what should be recorded for an intermittent fault?

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

143. After an unexpected indication appears, when is a wiggle or disturbance test acceptable?

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

144. During a supervisor-directed diagnostic task, why can a reset mislead a troubleshooter?

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

145. During a recurring-fault investigation, what separates evidence from assumption?

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

146. After a measurement does not match the prediction, what should happen at the limit of the maintainer's authority?

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

147. While preparing equipment for a functional test, what verifies that a correction worked?

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

148. When a signal response appears more permissive than expected, what does root-cause thinking add after a symptom is corrected?

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

149. After a protective device operates, what is valuable in a recurring-fault log?

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

150. While checking a battery-backed supply, what should be done when evidence remains insufficient?

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

Practice Exam 6: Answer Key and Explanations

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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