

# PRACTICE EXAM 7: FAA IA

## KNOWLEDGE TEST SIMULATION

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### Practice Exam 7 — Questions 1 through 50

1. A mechanic is reviewing the aircraft records and discovers that a major alteration was performed four years ago without any Form 337 documentation. The correct regulatory status is:

- A. An unairworthy condition requiring resolution of the documentation gap
- B. An acceptable condition because the alteration is older than three years
- C. An acceptable condition if the modification works as installed
- D. A minor discrepancy correctable at next scheduled maintenance

2. Under 14 CFR § 43.3(d), which person is authorized to approve aircraft for return to service after a major repair?

- A. The aircraft owner who performed the repair
- B. Any certificated mechanic regardless of rating
- C. The holder of an Inspection Authorization
- D. The repair facility's administrative supervisor

3. An IA is performing a records review and finds that the altimeter system was last tested 27 calendar months ago. The aircraft will be operated IFR in controlled airspace. The correct disposition is:

- A. Accept the records and approve the aircraft for IFR operation
- B. Conduct the inspection without addressing the lapsed test

- C. Note the lapse and proceed with routine operations
- D. Require § 91.411 testing before IFR operation

4. The AC 43.13-1B Chapter 4 specifies the minimum edge distance for rivets in sheet metal repair is typically:

- A. One fastener diameter from the edge
- B. Two fastener diameters from the edge
- C. Four fastener diameters from the edge
- D. Five fastener diameters from the edge

5. A propeller governor on a constant-speed installation adjusts which parameter to maintain selected RPM?

- A. Propeller blade pitch
- B. Engine throttle setting
- C. Magneto timing advance
- D. Carburetor fuel mixture

6. Under 14 CFR § 91.7(a), no person may operate a civil aircraft unless it is:

- A. Approved by the operator's preferred inspection program
- B. Maintained by a Part 145 certified repair station
- C. In an airworthy condition
- D. Operated under a continuous airworthiness program

7. A field approval granted by an Aviation Safety Inspector is documented on:

- A. FAA Form 8610-1 Block 4 for mechanic applications
- B. FAA Form 337 Block 3 for field approvals
- C. FAA Form 8130-3 Block 7 for part approvals
- D. FAA Form 8310-5 Block 2 for IA approvals

8. An airworthiness directive has an effective date of July 1, 2025, and requires recurring inspection every 150 hours. The aircraft was inspected per the AD at aircraft time 1,800 hours on July 10, 2025. The next compliance is due at:

- A. 1,850 hours
- B. 1,900 hours
- C. 1,925 hours
- D. 1,950 hours

9. An IA is reviewing a Form 337 submission and finds the Block 8 description reads only "Avionics upgrade per STC." The description is:

- A. Fully acceptable because STC reference is included
- B. Acceptable for minor alteration work only
- C. Inadequate and likely to be rejected
- D. Subject to FAA review for adequacy assessment

10. Under § 43.3(g), which category of work may be performed by a certificated pilot on the pilot's own aircraft?

- A. Preventive maintenance as listed in Part 43 Appendix A paragraph (c)

- B. Minor repairs within the mechanic's professional judgment
- C. Major alterations using approved data
- D. Structural welding repairs to the engine mount

11. The IA's record review identifies a gap in the AD compliance history. The appropriate action is to:

- A. Ignore the gap if the aircraft has been operating normally
- B. Complete the annual inspection and address the gap afterward
- C. Return the aircraft to service with a note about the gap
- D. Research and verify AD compliance before the airworthiness determination

12. The regulatory basis for the Special Flight Permit authority is found in:

- A. 14 CFR § 21.197 and § 21.199
- B. 14 CFR § 43.9 and § 43.11
- C. 14 CFR § 65.95 and § 65.93
- D. 14 CFR § 91.409 and § 91.417

13. An IA inspecting control cables finds one cable with a single broken strand along a straight run and no other damage. Per AC 43.13-1B Chapter 7, the condition is:

- A. Automatically unairworthy regardless of location
- B. Indicative of immediate cable failure risk
- C. Evaluated against specific cable wear criteria
- D. Acceptable only under emergency conditions

14. Under § 65.91(c), the fixed base of operations requirement for an IA applicant means the applicant must be:

- A. Based exclusively at a single airport with tower operations
- B. Reachable in person or by telephone during a working week
- C. Employed by a single certified repair station
- D. Operating from a hangar of minimum specified size

15. The FAA Form 8110-3 is signed by which type of authorized individual?

- A. An Aviation Safety Inspector at a FSDO
- B. An Inspection Authorization holder
- C. A certificated A&P mechanic with airframe rating
- D. A Designated Engineering Representative

16. A pre-inspection records review reveals that the propeller has been installed on the aircraft for 10 years and has recorded 2,800 hours of service. The IA should:

- A. Verify whether the propeller is due for overhaul per manufacturer recommendation
- B. Require immediate propeller replacement regardless of condition
- C. Treat the propeller as permanent and beyond further assessment
- D. Ignore the time-in-service figure as non-regulatory

17. Under § 43.11(a), the inspection record entry for an airworthy annual inspection must state that:

- A. The aircraft is approved for IFR operations
- B. The aircraft has been determined to be in airworthy condition
- C. The inspection was approved by the FSDO in advance

D. The aircraft's market value meets insurance requirements

18. A mechanic is selecting hardware for an aircraft structural repair. The hardware must meet which specification requirement?

- A. Any hardware available at a commercial supplier
- B. Only hardware provided by the aircraft's original manufacturer
- C. The mechanic's own preferred brand and supplier
- D. An established industry standard such as AN, MS, or NAS

19. Under AC 43.13-1B Chapter 6, exfoliation corrosion is characterized by:

- A. Deep pits penetrating the metal substrate
- B. Uniform thinning of the metal surface
- C. Visible lifting or flaking of surface layers
- D. Surface discoloration without material loss

20. The IA's verification sequence for an STC-installed alteration includes confirmation of:

- A. STC applicability to the specific aircraft make, model, and serial number
- B. The owner's training completion for the modified aircraft operation
- C. The STC holder's retail pricing policy
- D. The installer's hourly labor rate for the installation

21. Under 14 CFR § 91.213(d), an inoperative item may be deferred if not required by the Type Certificate Data Sheet, regulations, an AD, or the flight manual, and if the item is:

- A. Removed from the aircraft or its cockpit control placarded

- B. Approved for deferral by the FAA FSDO supervisor
- C. Noted in the aircraft insurance policy documentation
- D. Documented in the pilot's personal training records

22. Section 43.15(c) requires the engine to be run for what purpose at the end of an annual or 100-hour inspection?

- A. To warm the engine before the next flight operation
- B. To consume excess fuel from the aircraft tanks
- C. To test the aircraft starter system's amperage
- D. To determine satisfactory performance per manufacturer recommendations

23. The aircraft's Certificate of Airworthiness remains effective as long as maintenance is performed per Parts 43 and 91 and:

- A. The aircraft remains registered in the United States
- B. The aircraft has been flown within the preceding 12 months
- C. The owner has renewed the certificate every 24 months
- D. The aircraft has not been sold to a new owner

24. A differential cylinder compression test is performed on a Continental engine with a service limit of 60/80. A cylinder reads 58/80. The correct determination is:

- A. Compression is within service limits and acceptable
- B. Compression exceeds service limits and is acceptable
- C. Compression is below service limits and requires action
- D. Compression is acceptable pending retest at next inspection

25. The FAA Aircraft Registry accepts Form 337 submissions from which source?

- A. The aircraft owner through the USPS mail system
- B. A certificated mechanic or IA with appropriate authority
- C. The aircraft's insurance carrier as the responsible party
- D. The original aircraft manufacturer's service division

26. An IA is inspecting an aircraft at an annual inspection and discovers the engine has not been overhauled in 15 years with 2,400 hours of service. The engine manufacturer recommends overhaul at 2,000 hours or 12 years, whichever comes first. The IA's disposition is:

- A. Overhaul is mandatory and the aircraft is unairworthy
- B. Overhaul is recommended but not required for airworthiness
- C. The overhaul status is worth noting and verifying condition
- D. The aircraft requires immediate grounding regardless of condition

27. Under AC 43.13-1B Chapter 11, electrical bonding is particularly important at antenna installations for what reasons?

- A. To reduce the aircraft's electrical power consumption
- B. To simplify the maintenance schedule for the antenna
- C. To preserve the antenna's aesthetic appearance
- D. RF performance and lightning protection

28. A mechanic is performing a weld repair on an aircraft landing gear attachment. The work is classified as:

- A. Major repair requiring approved data and IA approval

- B. Preventive maintenance under § 43.3(g)
- C. Minor repair within A&P mechanic authority
- D. Routine maintenance without documentation required

29. Under § 43.9(a)(2), the maintenance record entry must include:

- A. The aircraft's fuel consumption rate during operation
- B. The date of completion of the work
- C. The owner's current address on the registration
- D. The mechanic's professional training background

30. An IA inspecting an aircraft with a wooden propeller finds the leading edge damaged beyond manufacturer dressing limits. The appropriate action is:

- A. Document the condition as noted and continue operation
- B. Apply a protective coating and defer the repair
- C. Note the finding in the next inspection schedule
- D. Address through repair or propeller replacement before return to service

31. Section 91.417(a)(2) requires certain maintenance records to be retained and transferred permanently with the aircraft. These include all of the following except:

- A. Total time in service of the airframe and each engine
- B. Status of applicable airworthiness directives
- C. Records of major alterations on Form 337
- D. The owner's monthly operational flight time logs

32. The FAA Dynamic Regulatory System is used by the IA to:

- A. Submit Form 337 documentation electronically
- B. Research airworthiness directives applicable to an aircraft
- C. Obtain special flight permits for ferry operations
- D. Register aircraft in the U.S. Civil Registry

33. An IA is inspecting an aircraft's fuel system and finds evidence of a fuel leak at a connection. The correct disposition is:

- A. Note the condition and schedule repair at next inspection
- B. Apply fuel additive to address the condition
- C. Correct the fuel leak before return to service
- D. Document the leak and continue flight operations

34. The IA's signature on the Form 337 Block 7 represents:

- A. The IA's determination that the work conforms to approved data
- B. A warranty of the installed equipment for a specified period
- C. An appraisal of the aircraft's market value increase
- D. A guarantee of future operational reliability

35. Under § 91.417(b), records of routine maintenance must be retained for what minimum period?

- A. One year or until the work is repeated, whichever occurs first
- B. Two years or until the aircraft is sold, whichever occurs first
- C. Three years or until the next annual inspection

D. Superseded by other work or one year, whichever occurs first

36. An IA is verifying AD compliance for an aircraft during an annual inspection. The verification must cover:

- A. The aircraft's structural components only
- B. All applicable ADs on aircraft, engine, propeller, and appliances
- C. Only ADs issued in the preceding 12 months
- D. Only ADs with terminating action options available

37. Under 14 CFR § 21.303, production of modification and replacement parts for sale is authorized by:

- A. Parts Manufacturer Approval granted by the FAA
- B. The aircraft owner's request for custom modifications
- C. The local FSDO for the requesting mechanic
- D. A repair station certificate issued under Part 145

38. The IA inspecting an aircraft's ELT under § 91.207(d) should verify:

- A. The ELT's compatibility with the aircraft's Mode S transponder
- B. The ELT operates on the aircraft's avionics bus
- C. The installation, battery condition, and operational testing
- D. The ELT's manufacturing tolerances and specifications

39. A type certificate data sheet specifies a maximum takeoff weight of 3,200 pounds. The aircraft has been operating at 3,350 pounds under the owner's personal judgment. The condition is:

- A. Acceptable because weight margin can vary with conditions

- B. Acceptable if the pilot adjusts power settings conservatively
- C. Not addressed by the TCDS weight specification
- D. A non-conformity to the approved type design

40. An IA is inspecting a control cable and discovers multiple broken strands at a pulley location. The disposition is:

- A. Replace the cable before return to service
- B. Apply cable lubricant to extend service life
- C. Note the condition for future inspection
- D. Continue operation and monitor the condition

41. Section 65.95(a)(1) prohibits the IA from approving major repairs or alterations for return to service on aircraft maintained under a continuous airworthiness program under:

- A. Part 43 or Part 65
- B. Part 91 or Part 135
- C. Part 121 or Part 127
- D. Part 145 or Part 91

42. Under 14 CFR § 91.203(a), which document must be on board the aircraft during operations?

- A. An effective airworthiness certificate
- B. The aircraft's original type certificate documentation
- C. The mechanic's FAA Form 337 for all alterations
- D. The aircraft's comprehensive insurance policy

43. An IA discovers that a fuel tank was altered from the original type design using only AC 43.13-2B as the data source. The correct determination is:

- A. The alteration is approved and may be accepted
- B. AC 43.13-2B is approved data for any alteration
- C. The alteration requires owner training verification
- D. AC 43.13-2B is not approved data for a major alteration

44. Under § 65.93, an activity that satisfies the IA renewal requirement is:

- A. Holding a current airman medical certificate
- B. Performing inspections of major repairs or alterations
- C. Paying an annual IA renewal fee
- D. Completing a pilot's recurrent flight training

45. The IA is assessing whether an aircraft is capable of safe flight for a Special Flight Permit. The assessment addresses:

- A. The pilot's qualification for the specific operation
- B. The owner's insurance coverage during the flight
- C. The airport's fuel supply during the permit period
- D. The aircraft's capability for the specific permit purpose

46. Under AC 43.13-1B Chapter 7, flight control cable tension must be measured and adjusted to:

- A. The aircraft owner's preferred settings
- B. The mechanic's professional judgment
- C. Manufacturer-specified values at specified temperatures

D. The standard tension for all aircraft of the same category

47. An IA discovers a suspect part with FAA-PMA markings but packaging inconsistent with the manufacturer's standard format. The part's status is:

A. Suspect and requires verification before installation

B. Automatically unapproved and must be destroyed

C. Acceptable based on the PMA marking alone

D. Approved if installed and tested satisfactorily

48. The Form 337 submission to the FAA Aircraft Registry must be completed within:

A. 24 hours of the return-to-service signature

B. 48 hours of the return-to-service signature

C. 72 hours of the return-to-service signature

D. 96 hours of the return-to-service signature

49. An aircraft's empty weight increased by 5.0 pounds after an alteration. The weight was added at station 60.0 inches. The moment change is:

A. +200.0 in-lb

B. +250.0 in-lb

C. +275.0 in-lb

D. +300.0 in-lb

50. Under § 43.11, the inspection certification statement for an unairworthy disposition must include reference to:

- A. The aircraft's approved maintenance schedule
- B. The operator's preferred inspection interval
- C. A dated list of discrepancies and unairworthy items
- D. The owner's insurance policy for coverage

# PRACTICE EXAM 7: ANSWER KEY AND EXPLANATIONS

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1. A — An unairworthy condition requiring resolution of the documentation gap. A major alteration performed without Form 337 documentation represents a non-conformity to approved type design, because the regulatory record linking the alteration to approved data is absent. The aircraft cannot be approved for return to service until the documentation gap is resolved, regardless of how long ago the alteration occurred.
2. C — The holder of an Inspection Authorization. Section 43.7(b) establishes that approval for return to service after major repairs and major alterations is exclusive to the Inspection Authorization holder. A&P mechanics without IA privileges cannot approve major work, and owners or administrative personnel have no return-to-service authority.
3. D — Require § 91.411 testing before IFR operation. Section 91.411 requires altimeter system and static pressure system testing within the preceding 24 calendar months for IFR operation in controlled airspace. A 27-month lapse exceeds this requirement; the aircraft is not eligible for IFR operation until testing is complete.
4. B — Two fastener diameters from the edge. AC 43.13-1B Chapter 4 establishes the minimum edge distance as typically 2D (two fastener diameters), measured from the fastener center to the nearest edge. This distance prevents edge tearing and preserves the structural integrity of sheet metal repairs.
5. A — Propeller blade pitch. The propeller governor adjusts blade pitch to maintain a selected RPM in a constant-speed installation. As power or airspeed changes, the governor varies pitch — throttle, timing, and mixture are adjusted by other controls.
6. C — In an airworthy condition. Section 91.7(a) prohibits operation of any civil aircraft unless it is in an airworthy condition. This is the regulatory foundation linking maintenance, inspection, and operational authority to the continuing airworthiness obligation.
7. B — FAA Form 337 Block 3 for field approvals. Field approvals granted by an Aviation Safety Inspector are documented in Block 3 of Form 337. The ASI's signature in this block establishes the approved data for the specific alteration or repair on the specific aircraft.
8. D — 1,950 hours. The next compliance is calculated by adding the recurring interval to the last compliance time:  $1,800 + 150 = 1,950$  hours. The AD effective date and compliance date are separate considerations; the next-due calculation simply adds the interval to the time of last compliance.

9. C — Inadequate and likely to be rejected. AC 43.9-1E requires Block 8 to describe the work with sufficient specificity that a future mechanic can verify conformity. "Avionics upgrade per STC" is a vague summary that does not identify the specific equipment, STC number revision, or installation details.
10. A — Preventive maintenance as listed in Part 43 Appendix A paragraph (c). Section 43.3(g) authorizes certificated pilots to perform preventive maintenance on their own aircraft, limited to the specific items listed in Part 43 Appendix A paragraph (c). Minor repairs, major alterations, and structural welding are not within pilot-owner authority.
11. D — Research and verify AD compliance before the airworthiness determination. Section 43.15 requires the inspector to determine that all applicable ADs have been complied with. An AD compliance gap must be researched and verified before airworthiness can be affirmed; proceeding with the inspection while ignoring the gap would be inconsistent with regulatory requirements.
12. A — 14 CFR § 21.197 and § 21.199. Section 21.197 establishes the authority to issue special flight permits and identifies permitted purposes; § 21.199 addresses the application procedure. These two sections together govern the permit process.
13. C — Evaluated against specific cable wear criteria. AC 43.13-1B Chapter 7 establishes specific criteria for evaluating control cable wear and broken strands based on location, cable type, and extent. A single broken strand is not automatically unairworthy; the regulatory standard is the applicable cable wear criterion, not a blanket rule.
14. B — Reachable in person or by telephone during a working week. Section 65.91(c)(3) requires the applicant to have a fixed base of operations where the applicant may be located in person or by telephone during a normal working week. The requirement ensures the IA can be contacted; it does not mandate a single airport, repair station employment, or hangar size.
15. D — A Designated Engineering Representative. Form 8110-3 is the Statement of Compliance signed by a Designated Engineering Representative (DER) to approve engineering data on behalf of the FAA. ASIs, IAs, and mechanics sign different forms for different purposes.
16. A — Verify whether the propeller is due for overhaul per manufacturer recommendation. Aircraft propellers have recommended overhaul intervals specified by the manufacturer. The IA's records review should verify whether the propeller is within its recommended overhaul interval, and an overdue propeller warrants attention during the inspection.
17. B — The aircraft has been determined to be in airworthy condition. Section 43.11(a) requires the airworthy inspection entry to state that the aircraft has been inspected in accordance with the applicable inspection and was determined to be in airworthy condition. IFR approval, FSDO authorization, and market value are not regulatory certification elements.
18. D — An established industry standard such as AN, MS, or NAS. Aircraft hardware must meet established industry specifications — AN (Army-Navy), MS (Military Standard), or NAS

(National Aerospace Standards). Commercial hardware, OEM-only requirements, and mechanic preferences alone are not acceptable for critical aircraft applications.

19. C — Visible lifting or flaking of surface layers. AC 43.13-1B Chapter 6 describes exfoliation corrosion as producing visible lifting or flaking of the surface layers. It is a form of intergranular corrosion that manifests on the surface and is identifiable by the layered, flaking appearance.
20. A — STC applicability to the specific aircraft make, model, and serial number. The IA's STC verification sequence begins with confirming that the specific aircraft is on the Approved Model List. An aircraft outside the AML is not covered by the STC, and the STC is not approved data for that installation.
21. A — Removed from the aircraft or its cockpit control placarded. Section 91.213(d) requires the inoperative item to be removed from the aircraft or its cockpit control placarded to identify the inoperative condition. FSDO approval, insurance notation, and pilot records are not regulatory alternatives.
22. D — To determine satisfactory performance per manufacturer recommendations. Section 43.15(c) specifically requires the engine to be run at the end of the inspection to determine satisfactory performance in accordance with the manufacturer's recommendations. The run-up verifies engine operation; it is not for warming, fuel consumption, or starter testing.
23. A — The aircraft remains registered in the United States. Section 21.181 establishes that a standard airworthiness certificate remains effective as long as maintenance is performed per Parts 43 and 91 and the aircraft is registered in the United States. Flight hours, renewal requirements, and ownership changes do not affect certificate validity directly.
24. C — Compression is below service limits and requires action. A differential compression reading of 58/80 is below the Continental service limit of 60/80, indicating excessive leakage past valves, rings, or head gasket. The cylinder must be addressed before return to service — action is required, not deferral or acceptance.
25. B — A certificated mechanic or IA with appropriate authority. Form 337 submissions originate from the certificated mechanic or IA who performed and approved the work. Owners, insurance carriers, and manufacturer service divisions are not the regulatory submitting party for Form 337.
26. C — The overhaul status is worth noting and verifying condition. Engine manufacturer overhaul recommendations are not regulatory requirements for Part 91 aircraft. The IA evaluates engine condition against operational evidence, service limit testing, and maintenance history; an overdue overhaul is relevant but not automatic grounds for airworthiness failure.
27. D — RF performance and lightning protection. AC 43.13-1B Chapter 11 emphasizes that bonding at antenna installations is critical for RF performance (the airframe acts as counterpoise) and for lightning protection. Power consumption, maintenance schedule, and appearance are not primary bonding functions.

28. A — Major repair requiring approved data and IA approval. Weld repair of landing gear attachment is specifically listed as a major repair under Part 43 Appendix A paragraph (b). Major repairs require approved data, Form 337 documentation, and IA approval for return to service.
29. B — The date of completion of the work. Section 43.9(a)(2) specifically requires the entry to include the date of completion of the work. Fuel consumption rates, owner addresses, and mechanic training are not required elements of the maintenance record entry.
30. D — Address through repair or propeller replacement before return to service. Leading edge damage beyond manufacturer dressing limits is not acceptable for continued operation. The damage must be addressed through propeller repair or replacement before return to service; documenting, coating, or scheduling alone are not substitutes for corrective action.
31. D — The owner's monthly operational flight time logs. Section 91.417(a)(2) requires permanent retention and transfer of total time in service, life-limited parts status, inspection status, AD compliance, and major alteration Form 337s. Monthly operational flight time logs by the owner are not among the permanent records required.
32. B — Research airworthiness directives applicable to an aircraft. The FAA Dynamic Regulatory System (DRS) is the FAA's online portal for accessing current and historical ADs. The IA uses DRS to build the complete list of ADs applicable to a specific aircraft, engine, propeller, and installed appliances.
33. C — Correct the fuel leak before return to service. Fuel leaks are safety-critical findings that can lead to fire, reduced fuel supply, or contamination. The leak must be corrected before return to service; deferral, fuel additives, and continued operations are not appropriate responses to active fuel leaks.
34. A — The IA's determination that the work conforms to approved data. The Form 337 signature represents the IA's regulatory determination that the work was accomplished in accordance with the approved data. The signature is not a warranty, market appraisal, or performance guarantee.
35. D — Superseded by other work or one year, whichever occurs first. Section 91.417(b)(1) establishes that ordinary maintenance records must be retained until the work is repeated or superseded by other work, or for one year after the work, whichever occurs first. This is the default retention standard for routine maintenance.
36. B — All applicable ADs on aircraft, engine, propeller, and appliances. Section 43.15 requires the IA to determine that all applicable ADs have been complied with. This extends to ADs on the airframe, engine, propeller, and every installed appliance subject to AD applicability.
37. A — Parts Manufacturer Approval granted by the FAA. Section 21.303 specifies that production of modification and replacement parts for sale requires specific FAA authorization, typically Parts Manufacturer Approval. Owner requests, FSDO permissions, and repair station certificates do not authorize part production.

38. C — The installation, battery condition, and operational testing. Section 91.207(d) specifies the ELT inspection elements: proper installation, battery condition, operation of controls and crash sensor, and presence of sufficient signal. Transponder compatibility, avionics bus connection, and manufacturing tolerances are not specified inspection elements.
39. D — A non-conformity to the approved type design. Operation above the TCDS-approved maximum takeoff weight is a non-conformity to approved type design. The operator's judgment does not authorize deviation from the TCDS; the weight limitation is part of the approved type design, and exceeding it renders the aircraft outside conformity.
40. A — Replace the cable before return to service. AC 43.13-1B Chapter 7 establishes that broken strands at pulley locations — where cables undergo cyclic flexing — are particularly consequential. A cable with broken strands at a pulley location is an unairworthy condition requiring replacement before return to service.
41. C — Part 121 or Part 127. Section 65.95(a)(1) specifically prohibits the IA from approving return to service for aircraft maintained under continuous airworthiness programs under Part 121 or Part 127. These are the regulations governing commercial air carrier operations with approved maintenance organizations.
42. A — An effective airworthiness certificate. Section 91.203(a) requires an effective airworthiness certificate to be aboard the aircraft during operations. The type certificate documentation, Form 337s, and insurance policies are not the regulatory document required to be aboard.
43. D — AC 43.13-2B is not approved data for a major alteration. AC 43.13-2B serves as acceptable methods, techniques, and practices for aircraft alterations but is not itself approved data for major alterations. A major alteration requires approved data from an STC, field approval, DER-approved data, or equivalent FAA source.
44. B — Performing inspections of major repairs or alterations. Section 65.93 lists five alternative renewal activities, including inspecting at least two major repairs or major alterations for each 90-day period the authorization has been held. Medical certificates, renewal fees, and flight training are not renewal activities.
45. D — The aircraft's capability for the specific permit purpose. The IA's attestation supporting a special flight permit assesses whether the aircraft is capable of safe flight for the specific purpose of the permit. Pilot qualifications, insurance coverage, and fuel supply are not regulatory elements of the IA's assessment.
46. C — Manufacturer-specified values at specified temperatures. AC 43.13-1B Chapter 7 requires flight control cable tension to be measured and adjusted to manufacturer-specified values at manufacturer-specified temperatures. Owner preferences, mechanic judgment, and standard values are not the regulatory specification.

47. A — Suspect and requires verification before installation. A part with inconsistent packaging relative to the manufacturer's standard format is a Suspected Unapproved Part indicator. The status is suspect, and verification is required before installation — regardless of the presence of PMA markings alone.
48. B — 48 hours of the return-to-service signature. Part 43 Appendix B requires Form 337 to be forwarded to the FAA Aircraft Registry within 48 hours after the aircraft is approved for return to service. This submission requirement is the regulatory timing standard.
49. D — +300.0 in-lb. The moment change is weight multiplied by arm:  $5.0 \times 60.0 = 300.0$  in-lb. Simple multiplication of weight and arm produces the moment change for any weight and balance revision.
50. C — A dated list of discrepancies and unairworthy items. Section 43.11(b) requires the certification statement for an unairworthy disposition to reference the dated list of discrepancies and unairworthy items provided to the owner. The approved maintenance schedule, preferred intervals, and insurance policy are not regulatory references.